1/40

Fig. 1

HPLC Profile
of PTI-777
(Batch II)

Fig. 2

HPLC Profile of PTI-777 (Batch I)

Fig. 3

Fig. 4

Legend (top right):

- ■ Aβ 1-42
- Aβ 1-42 + PTI-00703
- Aβ 1-42 + PTI-777
- Aβ 1-42 + Fraction F
- Aβ 1-42 + Fraction G
- Aβ 1-42 + Fraction H
- Aβ 1-42 + Fraction J
- Aβ 1-42 + Fraction K
- Aβ 1-42 + Fraction L
- Aβ 1-42 + Fraction M
- Aβ 1-42 + Fraction N
- Aβ 1-42 + isopteropodine
- Aβ 1-42 + pteropodine
- Aβ 1-42 + isomitraphylline
- Aβ 1-42 + mitraphylline

X-axis: Treatment Groups (Individual Fractions, Alkaloids)

Y-axis: Aβ 1-42 Fibrils (% of Controls) — 0, 40, 80, 120

Fig. 5A

Fig. 5B

Fig. 5C

Fig. 5D

Fig. 6

- ● Abeta1-42, 3 day, in PBS buffer
- ○ Abeta1-42 + PTC12 (1:0.1 (wt/wt)), 3 day incubation
- ▼ Abeta1-42 + PTC12 (1:0.1 (wt/wt)), 7 day incubation

MRE (deg cm² dmol⁻¹)
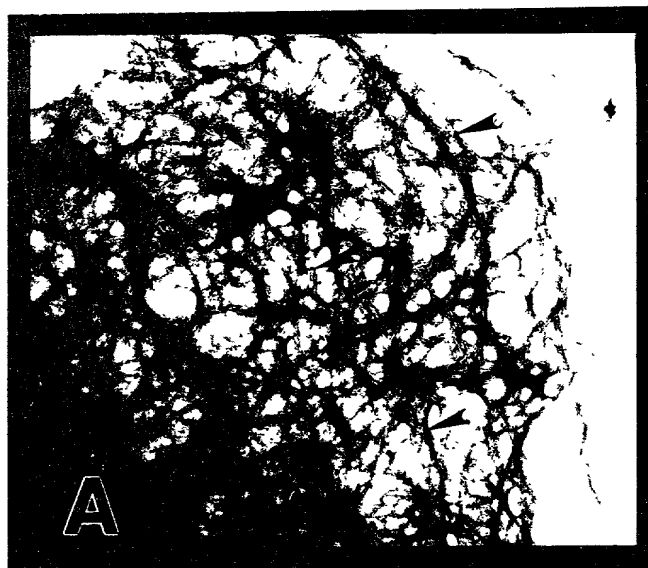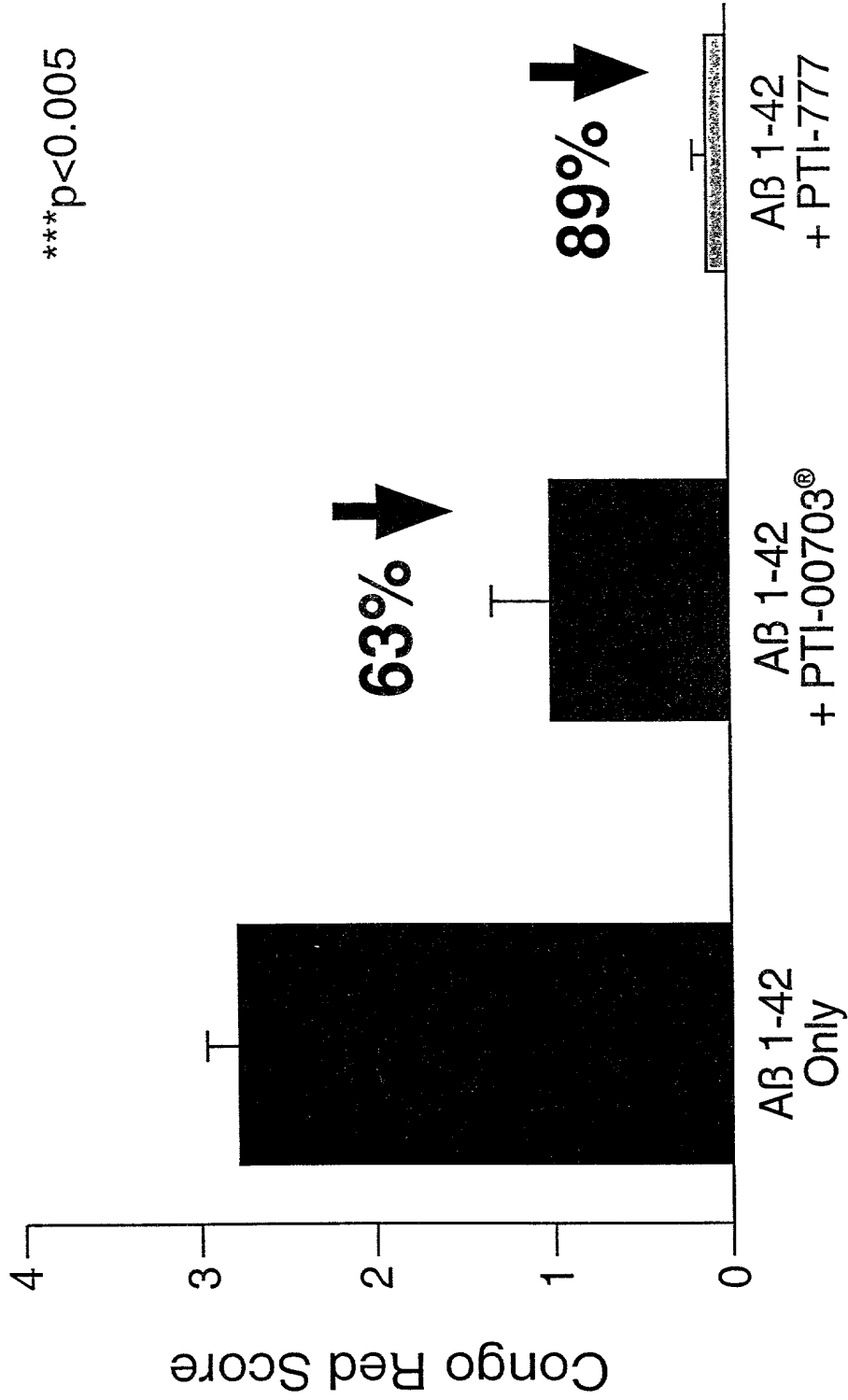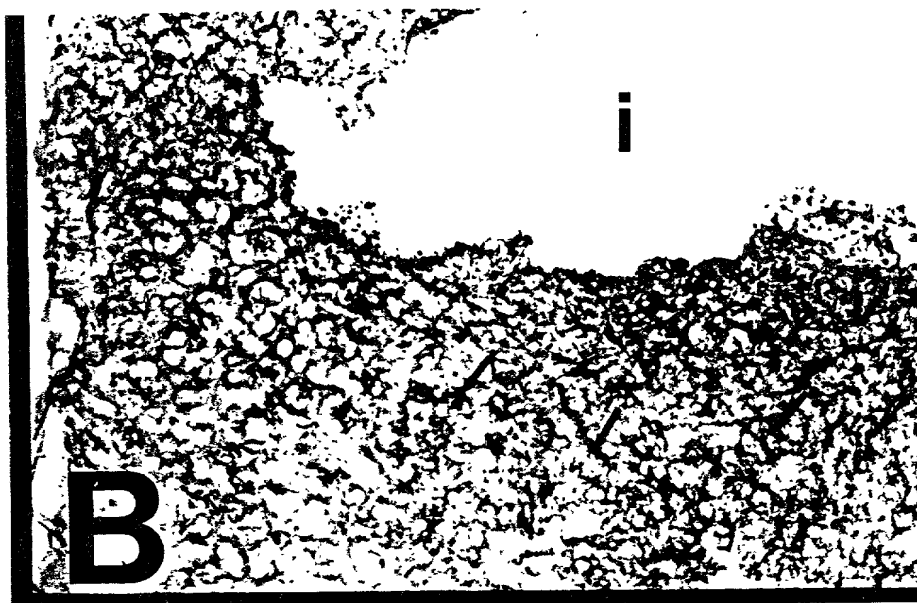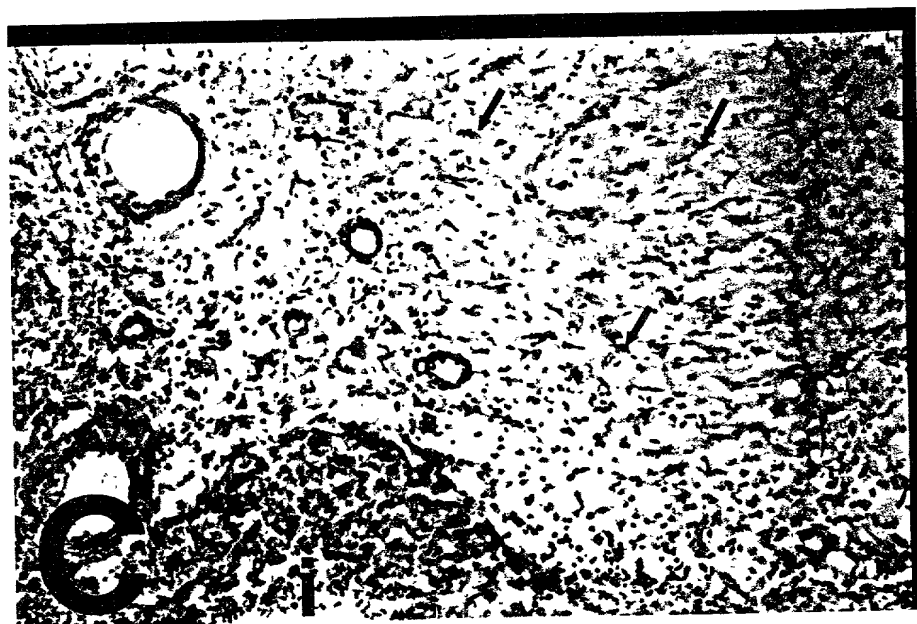
Wavelength (nm)

Fig. 7A

Fig. 7B

Fig. 8

Fig. 9A

Fig. 9B

Fig. 9C
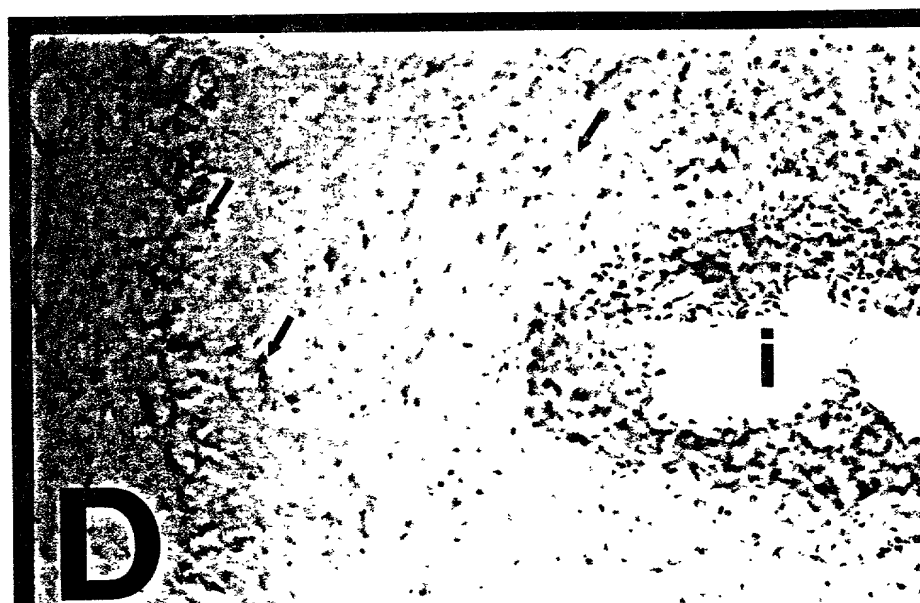

Fig. 9D

Fig. 10A

Fig.10B

Fig. 11

DAD1 A, Sig=230, 4 Ref=off

**HPLC Profile of
Unlabeled PTI-777**

Fig. 12A   Minutes

DAD1 A, Sig=230, 4 Ref=off

**HPLC Profile
of ^{3}H-PTI-777**

Fig. 12B   Minutes

LC, Solvent B: MeCN/TFA

**Radioactivity
Distribution
(0.5ml fractions)**

Fig. 12C   Minutes

³H-PTI-777 Radioactivity in Rat Brain

Time (h)

Radioactivity (dpm/g tissue)
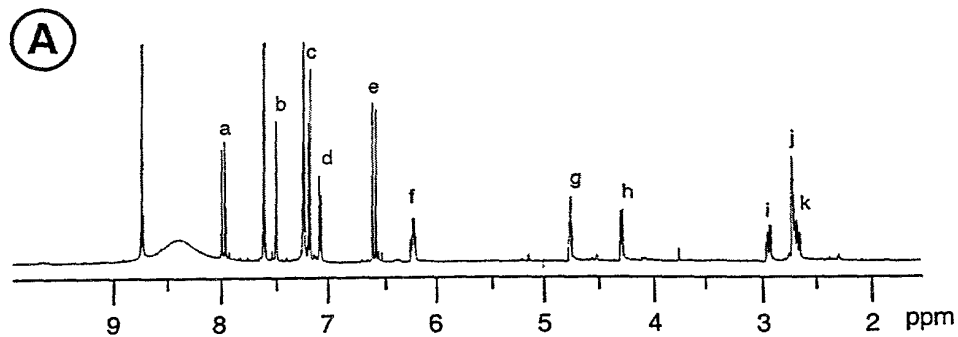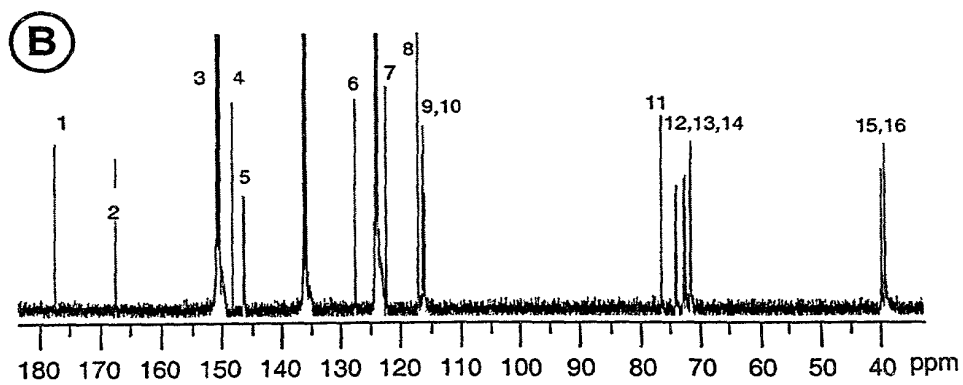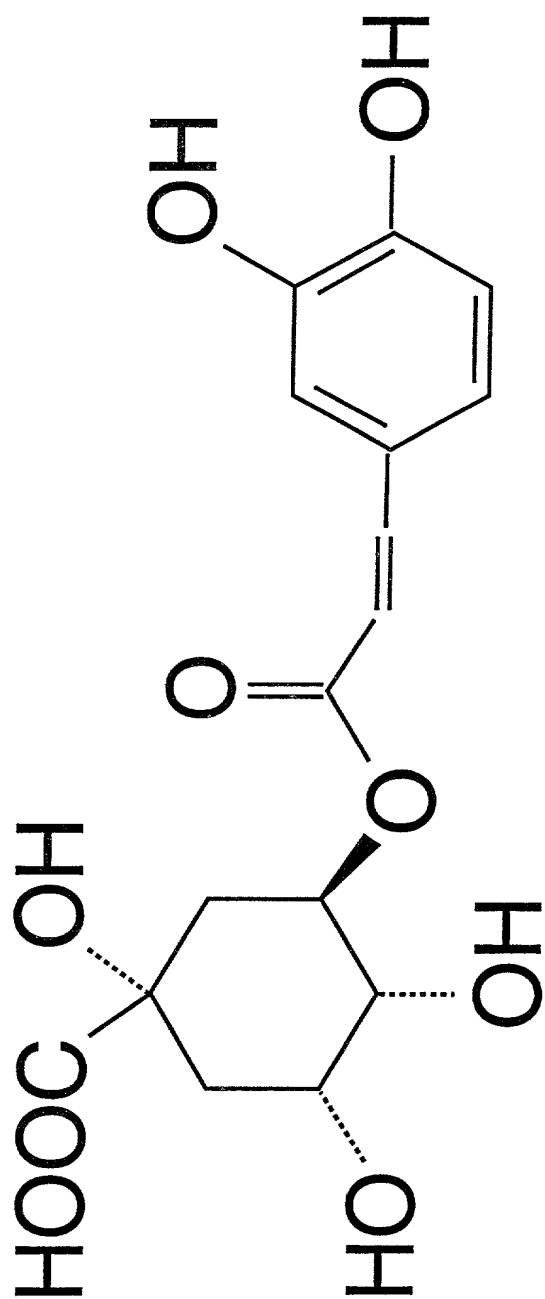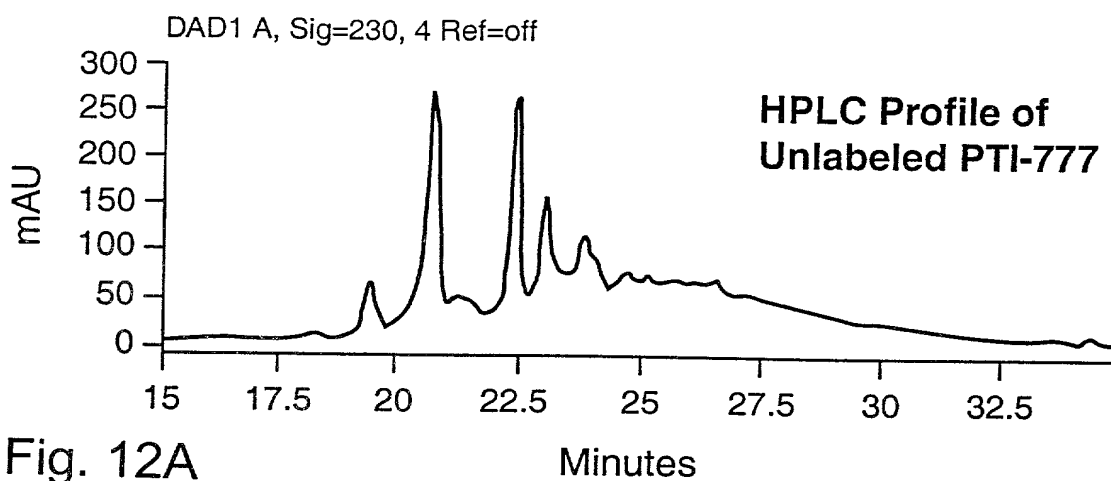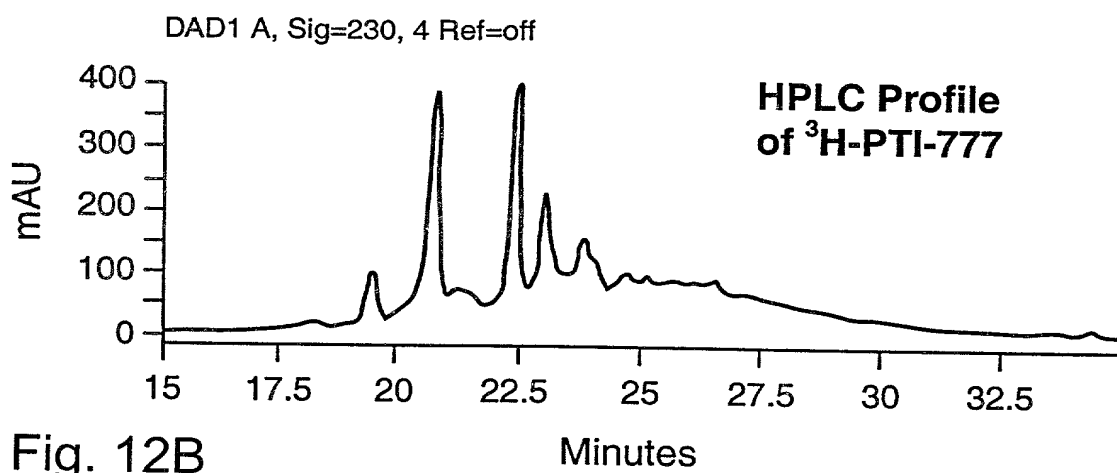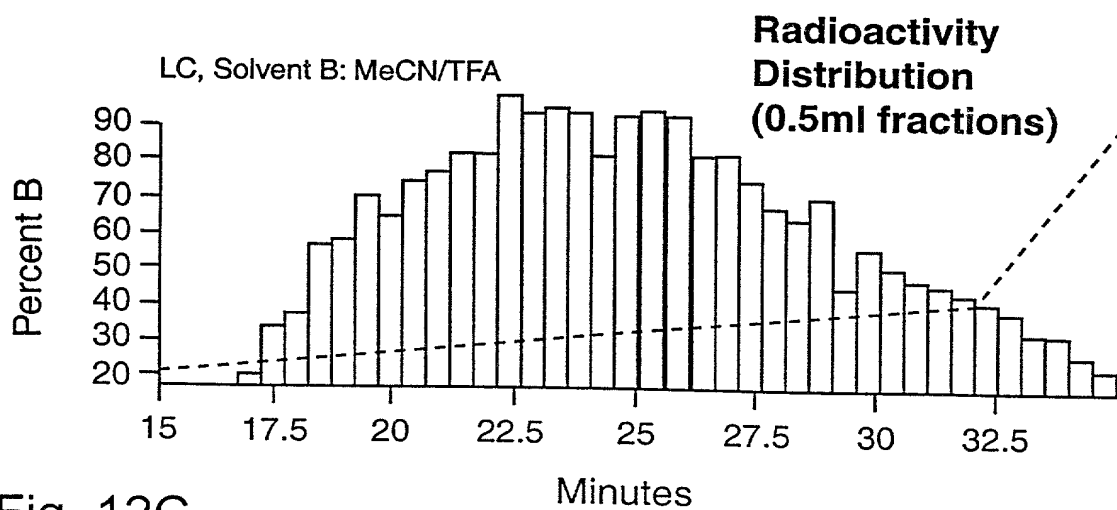
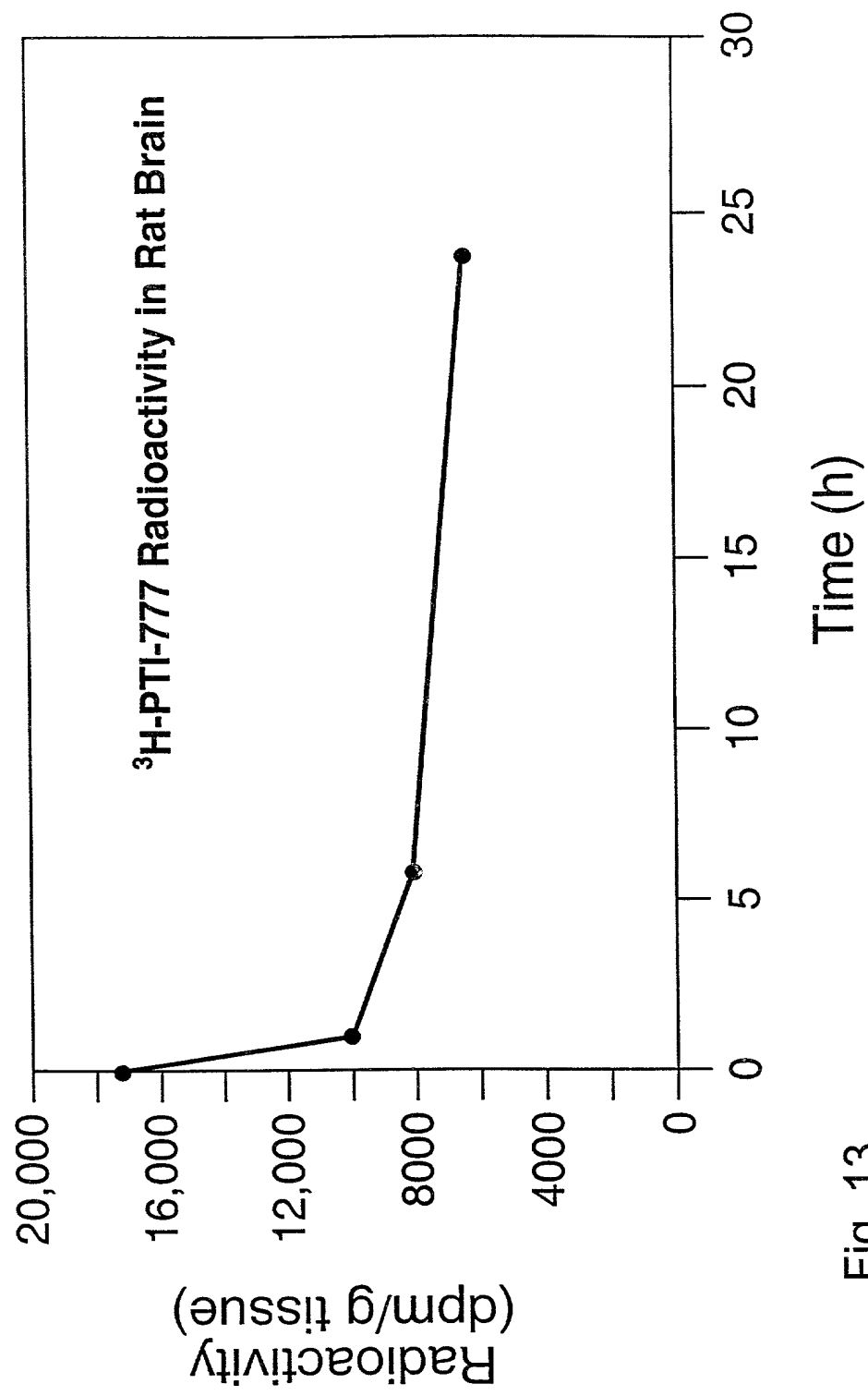Fig. 13

Jaguar Summed Mass Spectrum Report

File Name: G:__41.dat
Method Name:
Sample ID:
Instrument: JAGUAR

Time Run: 11/13/00 11:01:40 AM
Report Created: 11/13/00 11:03:26 AM
Operator:
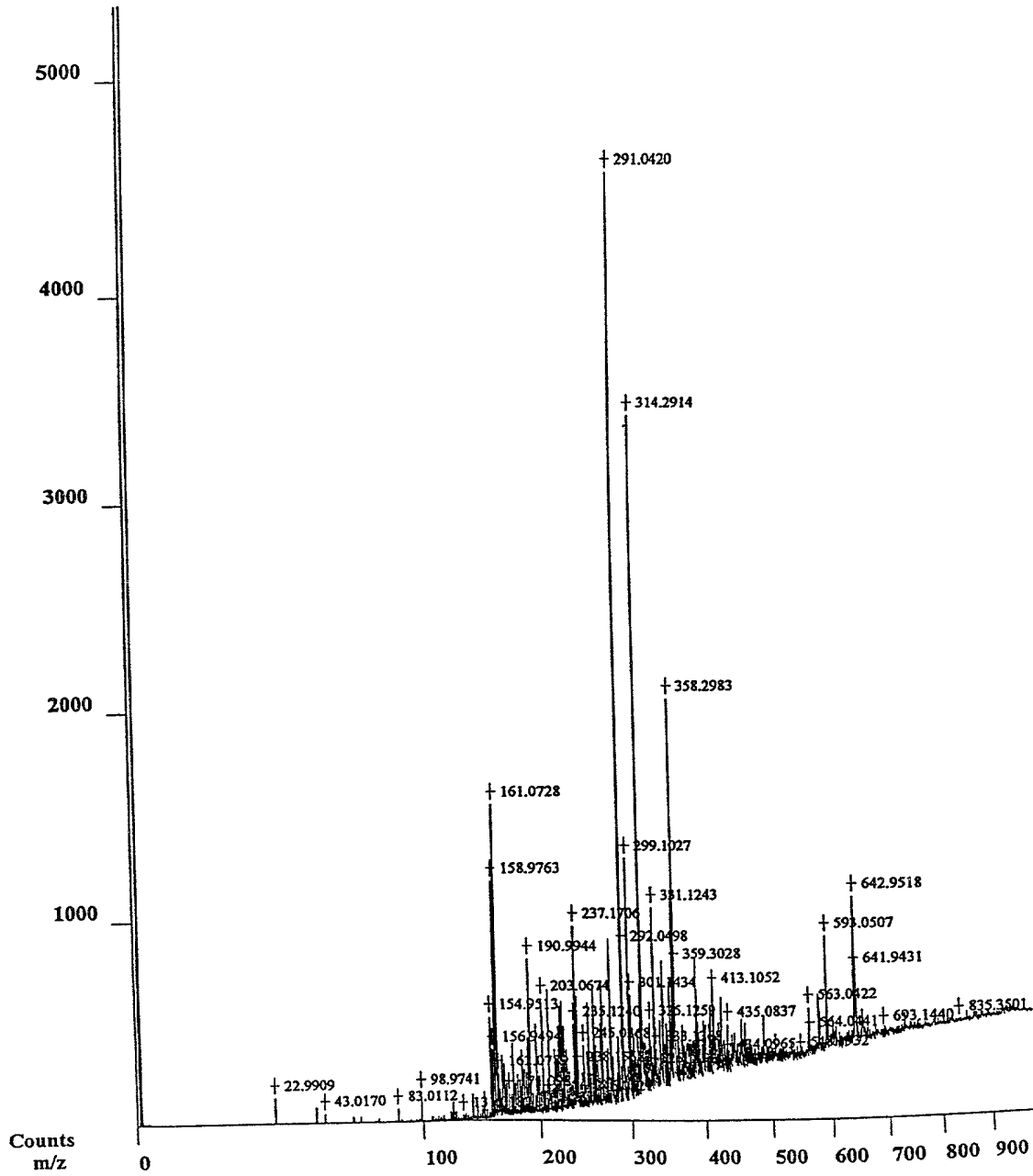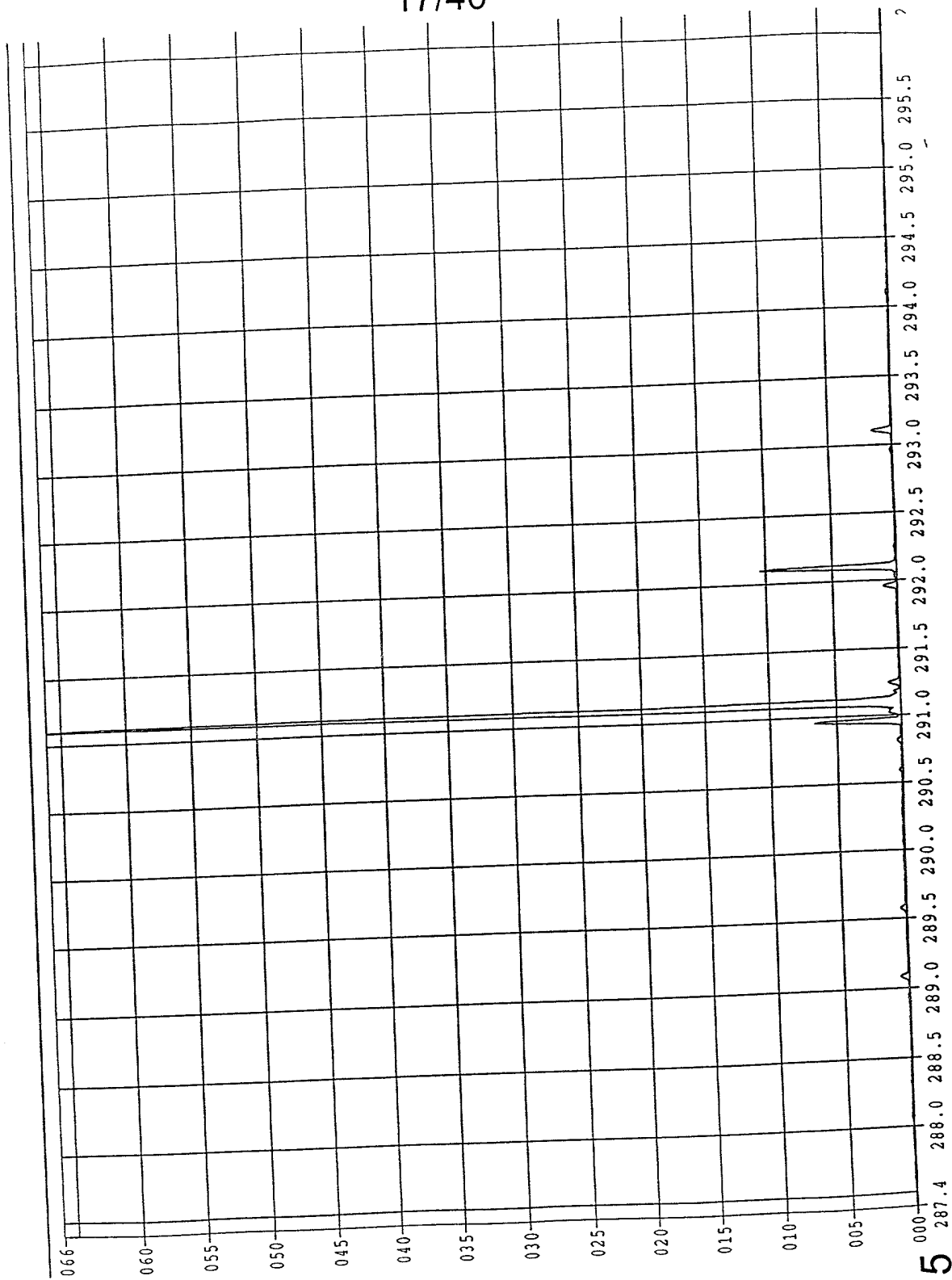Ionization Mode: ESI - positive ions

Spec # Range: 2706 - 2778

Fig. 14

Fig. 15

[Mass Spectrum]
Data . BYU_A776
Sample: 1
Note .
Inlet : Direct   Ion Mode : EI+
Spectrum Type : Normal Ion [MF-Linear]
RT : 0.64 min   Scan# : (5,8)
BP : m/z 140.0000   Int. : 135.19
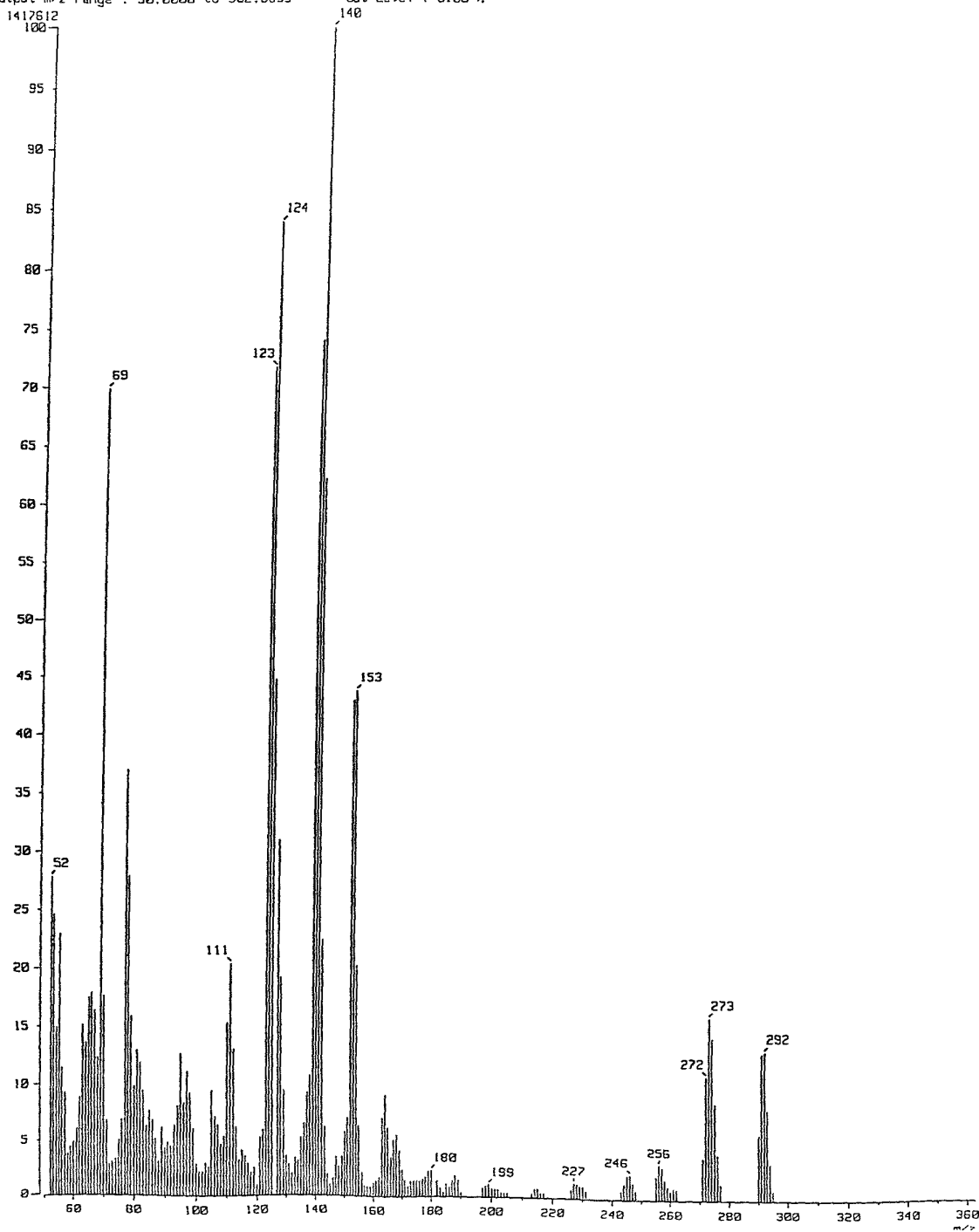Output m/z range : 50.0000 to 362.6855   Cut Level : 0.00 %

Fig. 16

[Mass Spectrum]
Data   : BYU_A349
Sample: acylated 1
Note   ThioGlycerol & Na
Inlet : Direct   Ion Mode . FAB+
Spectrum Type : Normal Ion [MF-Linear]
RT : 0.08 min   Scan# : (1,4)
BP : m/z 523.0000   Int. : 322.30
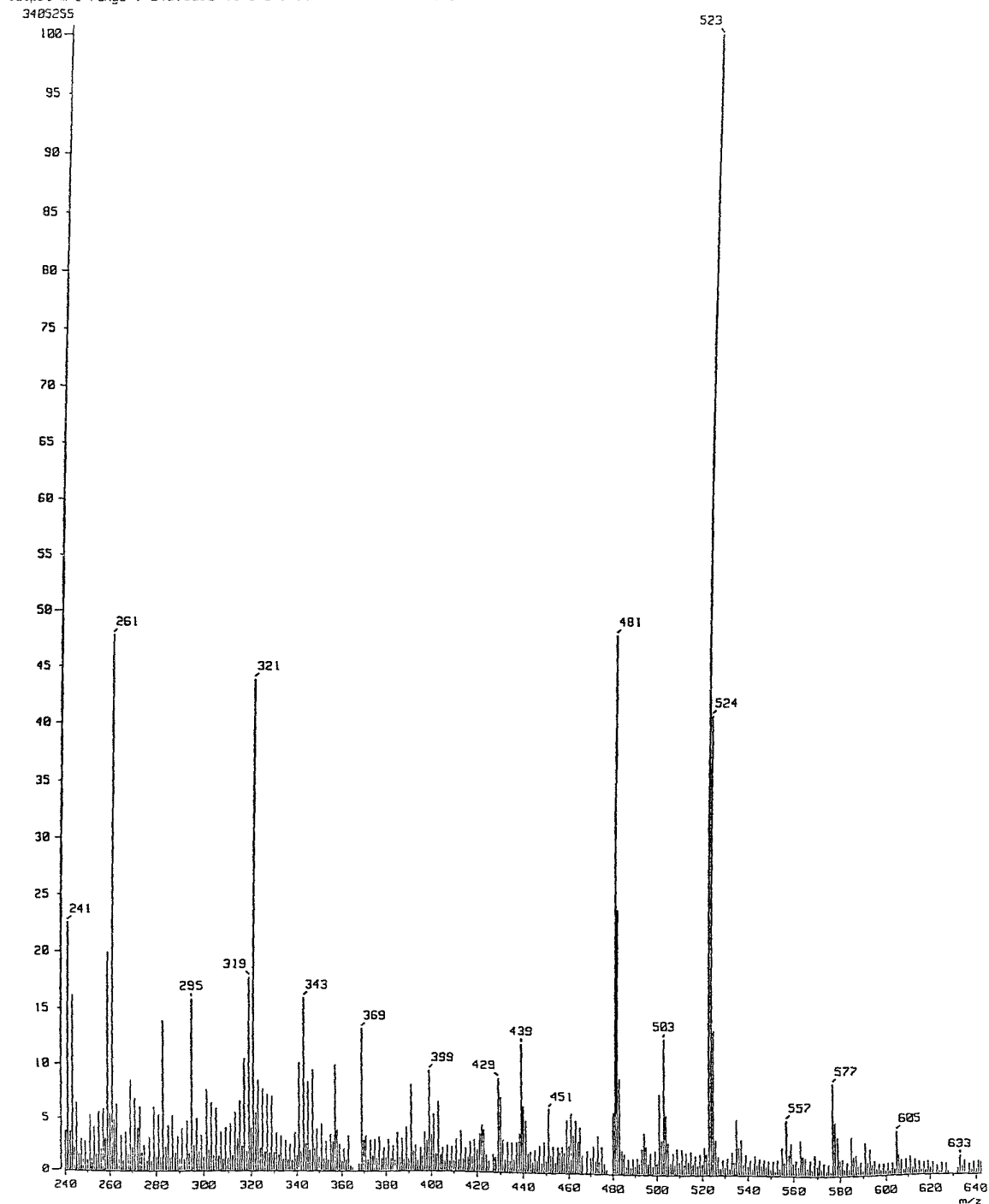Output m/z range : 240.0000 to 642.3739   Cut Level : 0.00 %

Fig. 17

[Mass Spectrum]
Data : BYU_A373
Sample: acylated-1
Note .
Inlet : Direct   Ion Mode : EI+
Spectrum Type · Normal Ion [MF-Linear]
RT : 0.89 min   Scan# : (7,9)-k((3,4))[k=1.0]
BP : m/z 398.0000   Int. : 68.70
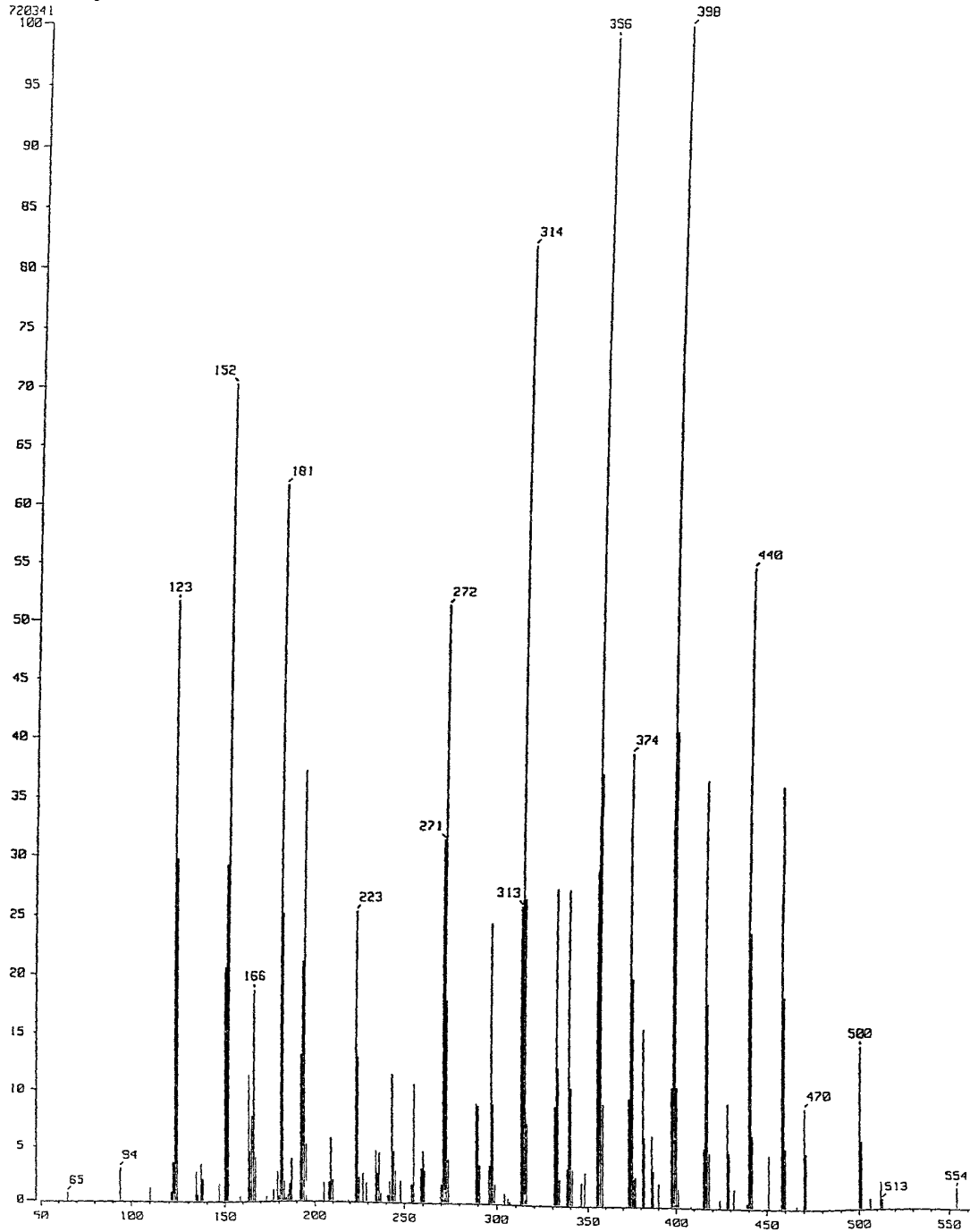Output m/z range : 50.0000 to 564.0950   Cut Level : 0.00 %
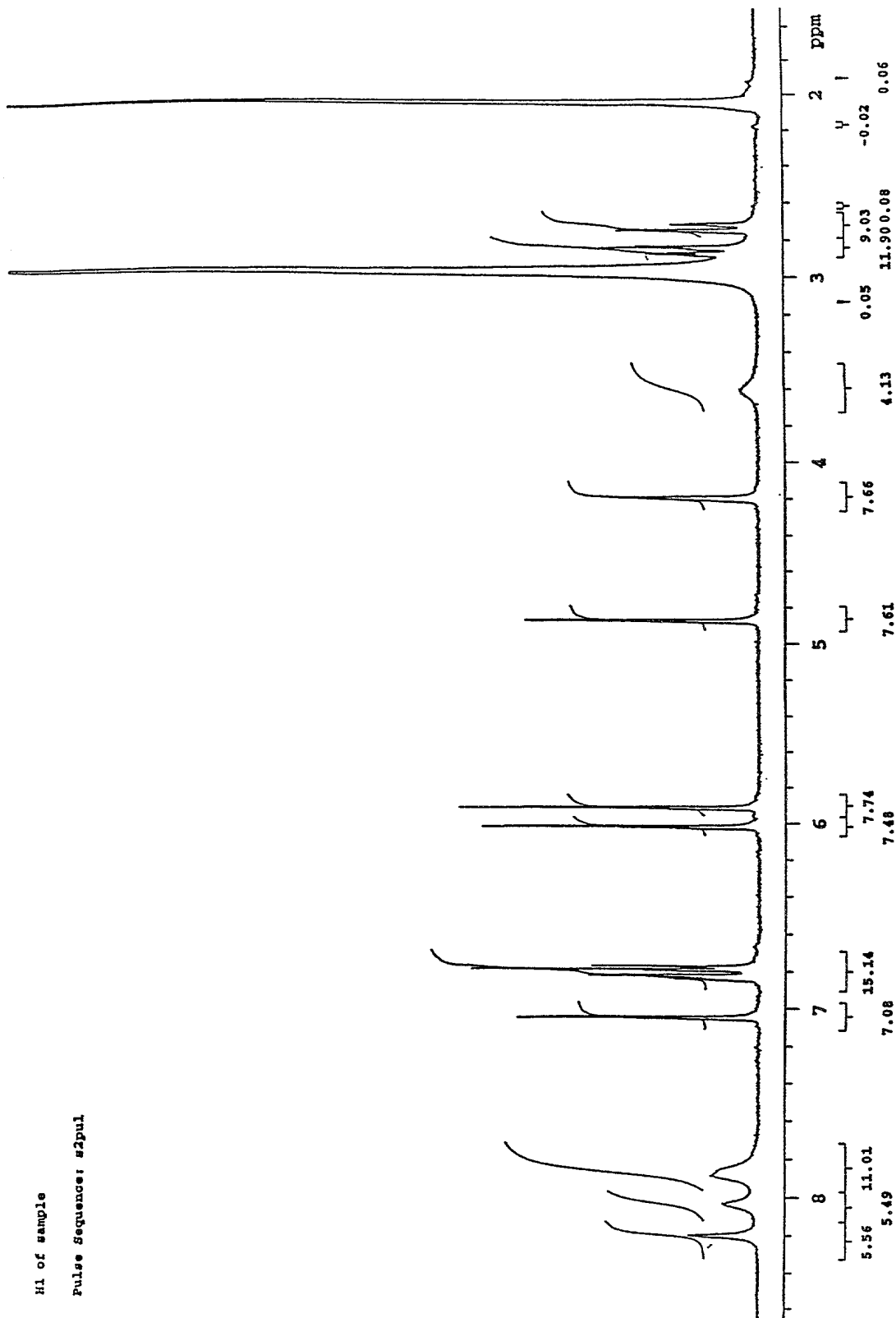

Fig. 18

H1 of sample

Pulse Sequence: s2pul

Fig. 19

ppm

2

3

4

5

6

7

8

0.06

-0.02

9.03 0.08

11.90

0.05

4.13

7.66

7.61

7.74

7.48

15.14

7.08

11.01

5.56 5.49

C13 of Sample. in Acetone-d6

Pulse Sequence: s2pul

29.060
29.457
29.614
29.767
29.920
30.077
30.230
30.383

66.982

79.492

95.720
96.198
99.851

115.351
115.534
119.424

132.345

145.350
145.456

157.233
157.648

206.417

ppm

40
60
80
100
120
140
160
180
200
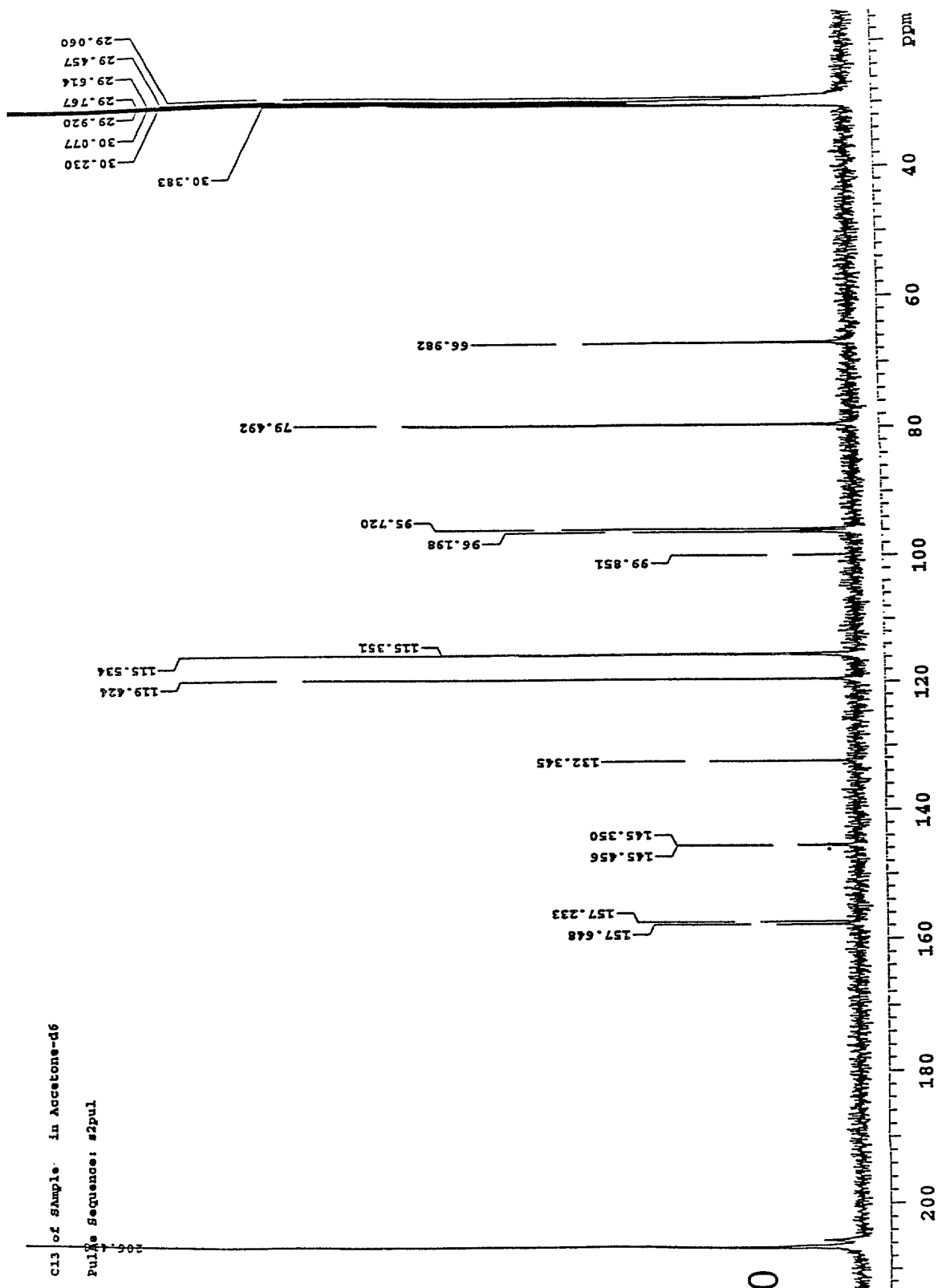
Fig. 20

H1
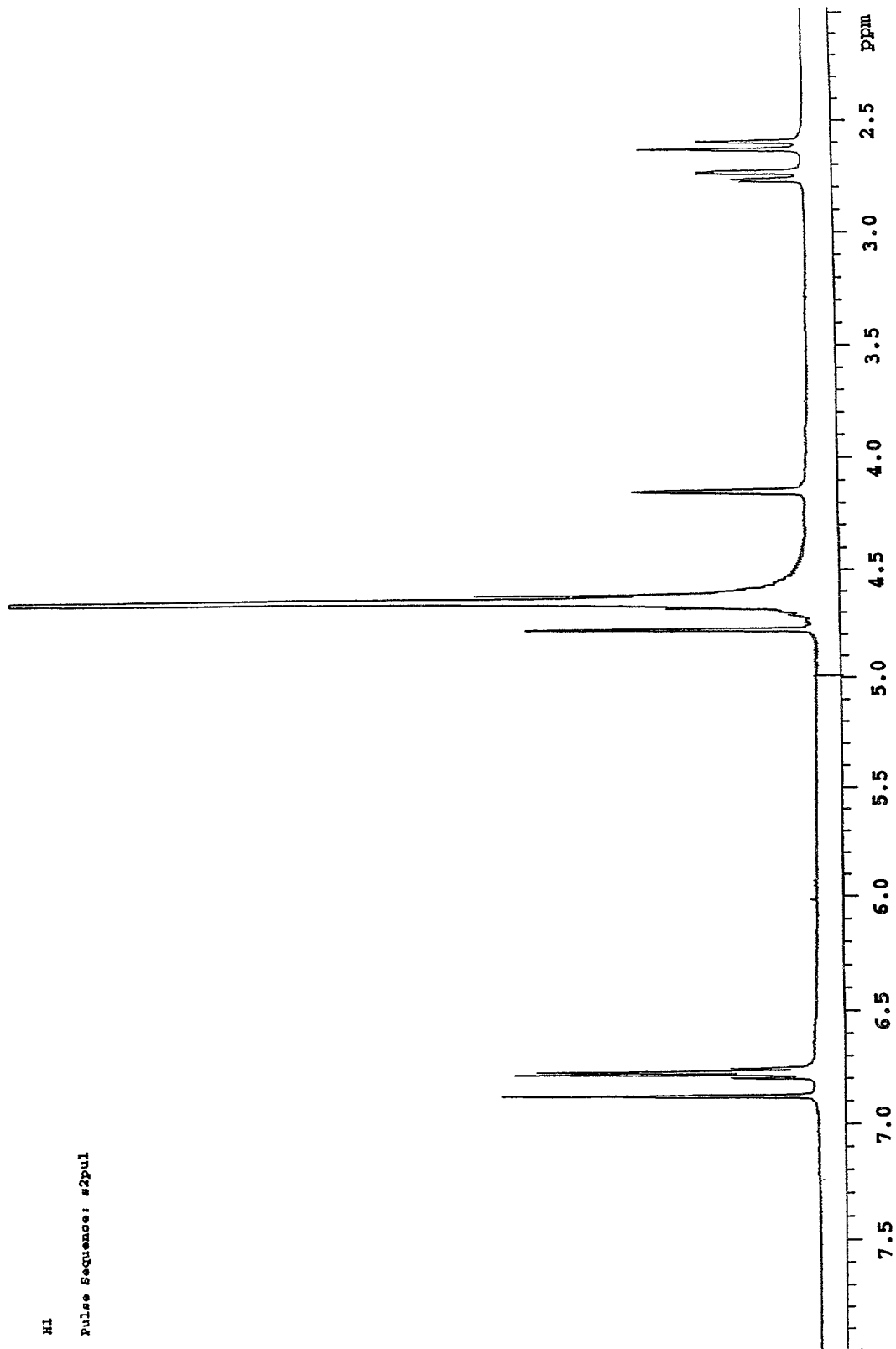
Pulse Sequence: s2pul

Fig. 21

C13 of Sample   in D2O.

Pulse Sequence: s2pul

27.580

65.821

78.313

99.946

114.593
116.263
119.194

131.219

143.875
144.026

155.535
155.748

163.208

Fig. 22

ppm

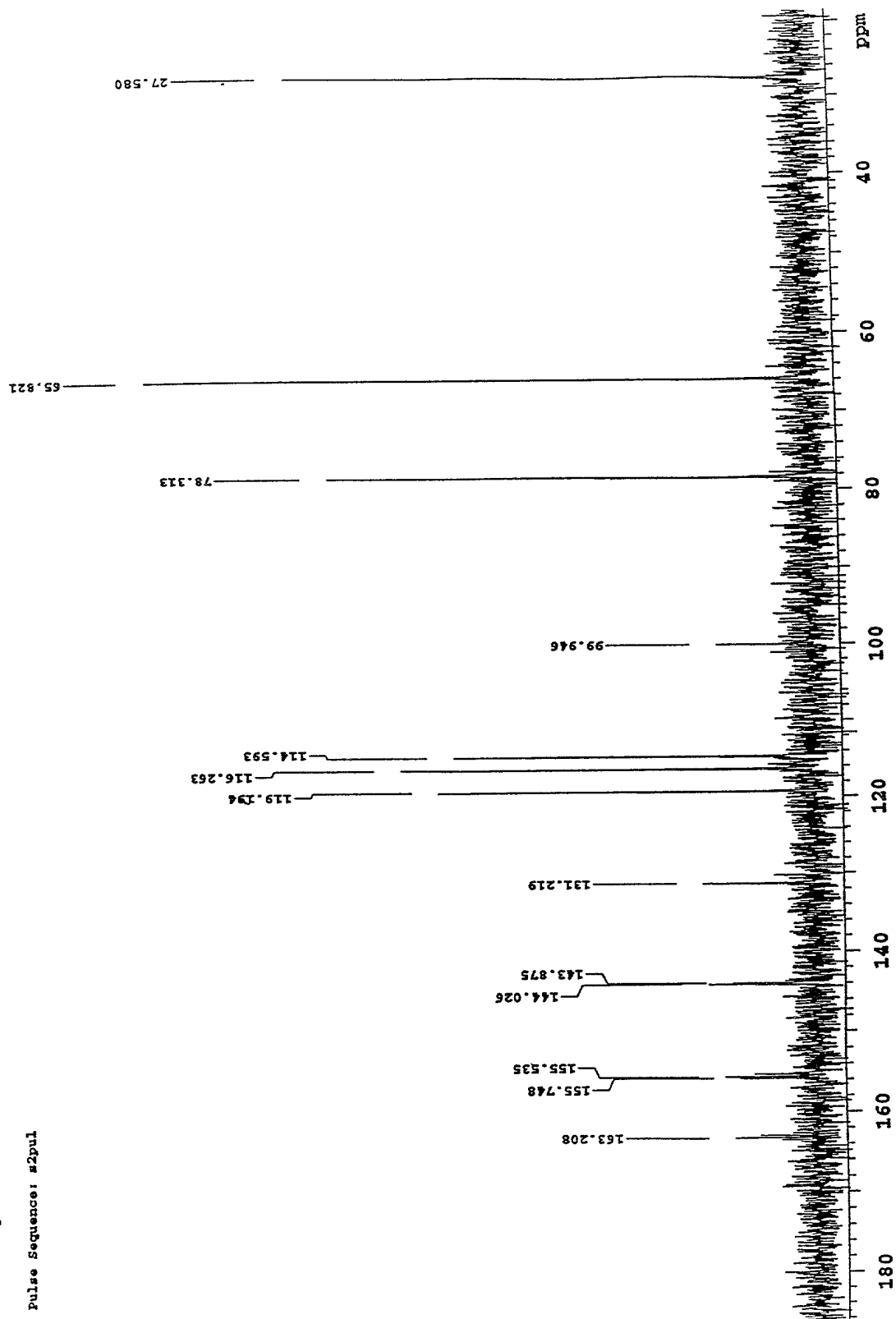180   160   140   120   100   80   60   40
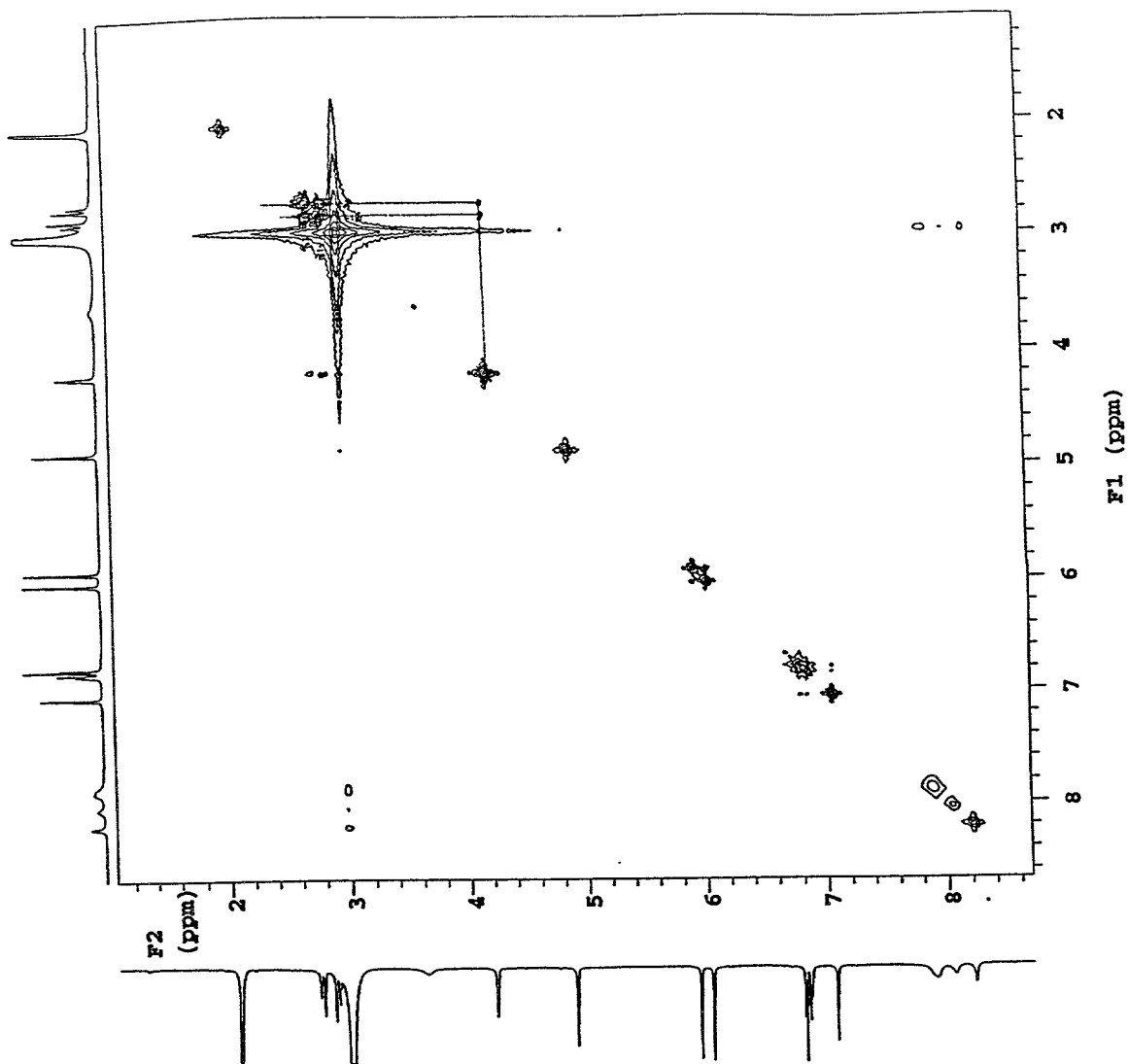
COSY of Sample

Pulse Sequence: relayh

Solvent: Acetone
Ambient temperature
UNITY-500 "nmr500"

PULSE SEQUENCE: relayh
COSY 90-90
Acq. time 0.302 sec
Width   3817.5 Hz
2D Width 3817.5 Hz
16 repetitions
159 increments
OBSERVE H1, 499.8814428 MHz
DATA PROCESSING
F1 DATA PROCESSING
  Line broadening 0.3 Hz
FT size 1024 x 1024
Total time 14 min, 12 sec

F1 (ppm)

F2
(ppm)

Fig. 23

COSY

Pulse Sequence: relayh

Solvent: D2O
Ambient temperature
UNITY-500 "nmr500"

PULSE SEQUENCE: relayh
Relax. delay 0.500 sec
COSY 90-90
Acq. time 0.178 sec
Width 2882.3 Hz
2D Width 2882.3 Hz
8 repetitions
120 increments
OBSERVE H1, 499.8801324 MHz
DATA PROCESSING
Line broadening 0.1 Hz
F1 DATA PROCESSING
Line broadening 0.3 Hz
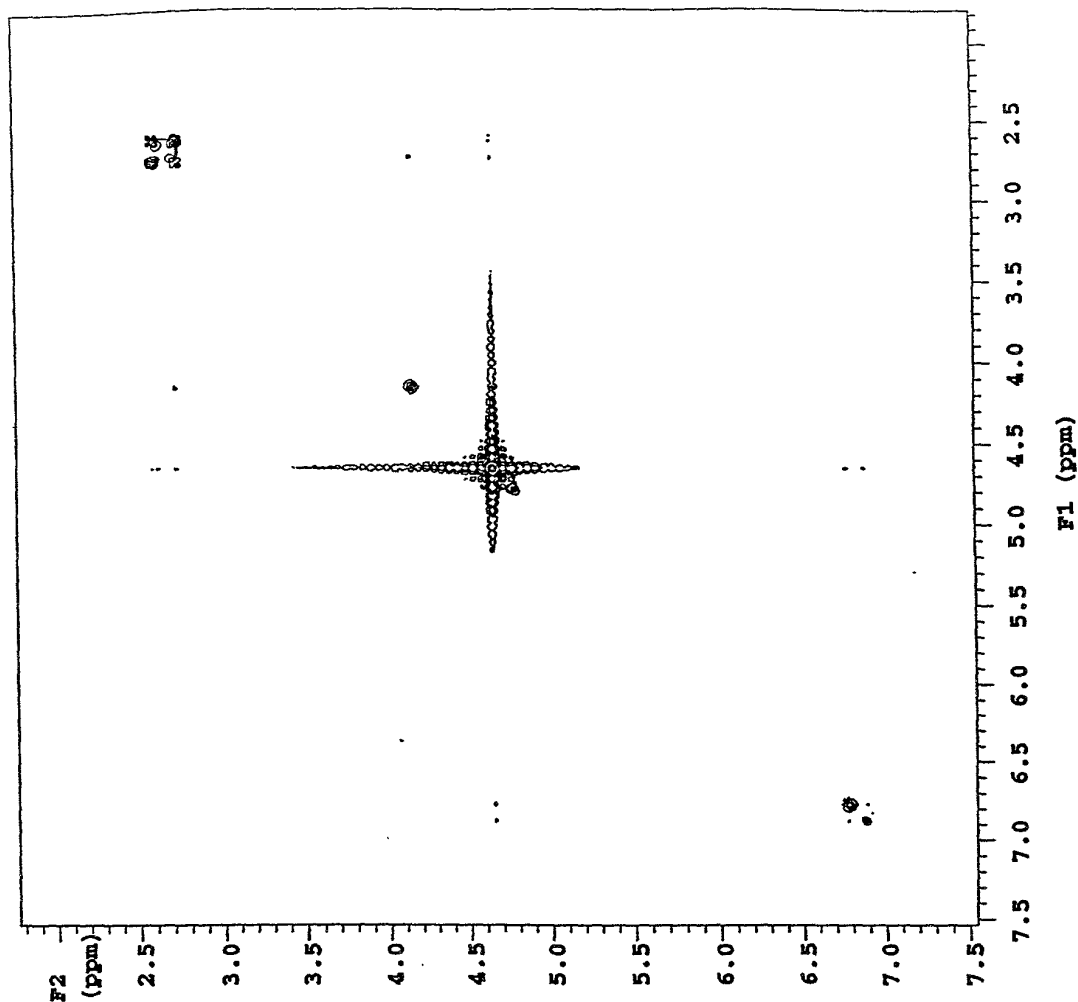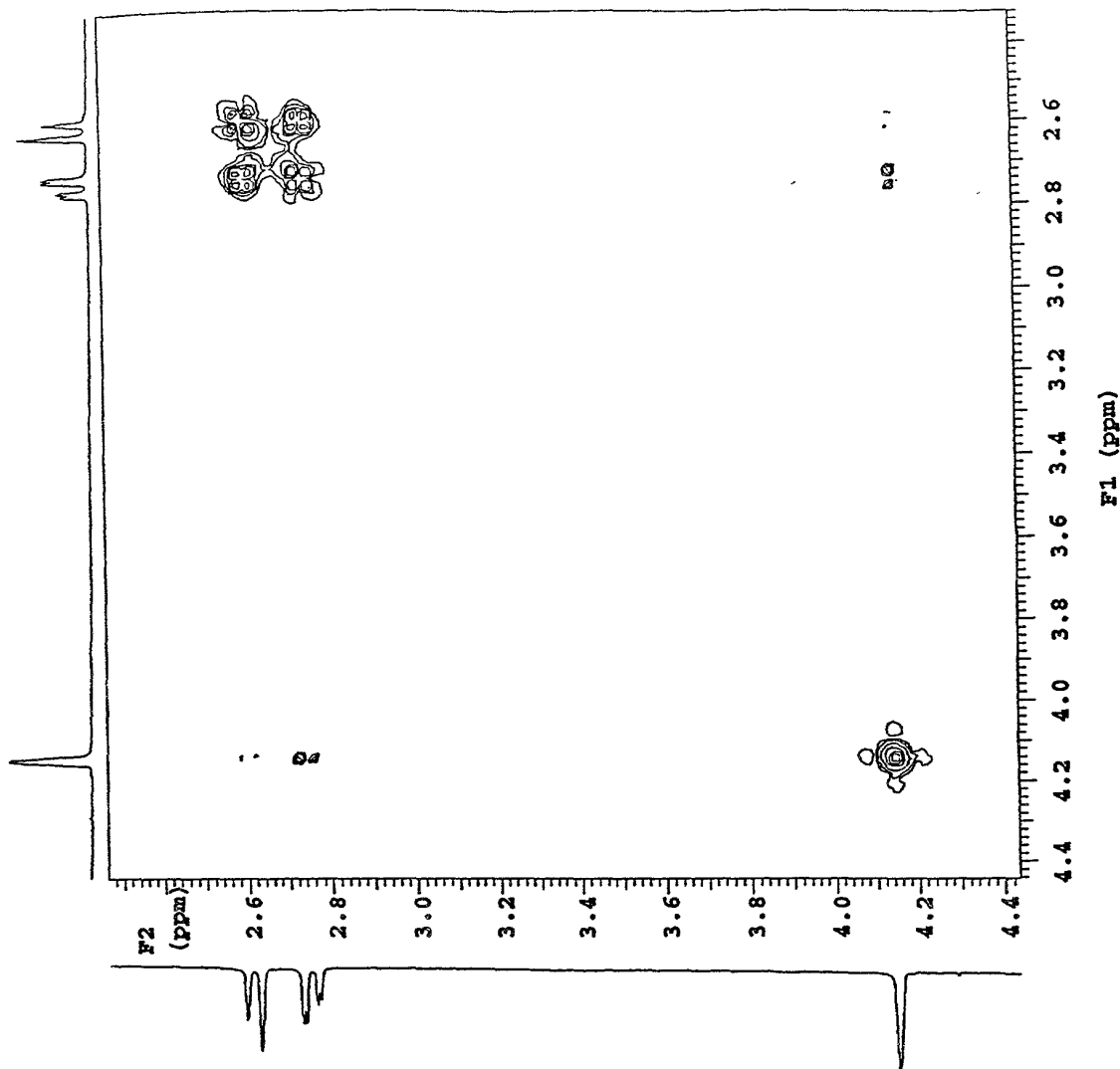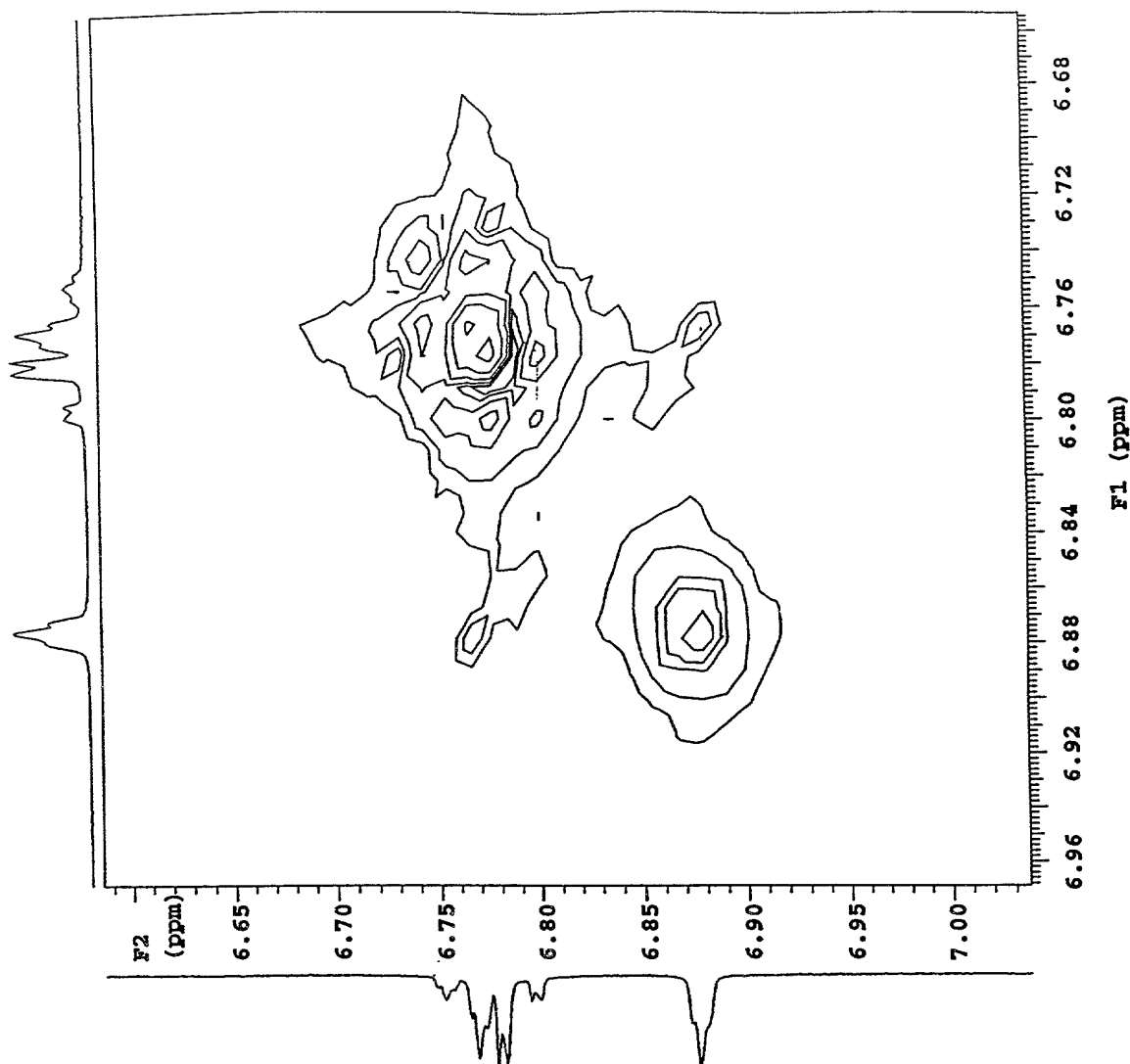FT size 1024 x 1024
Total time 11 min, 23 sec

Fig. 24A

COSY

Pulse Sequence: relayh

Solvent: D2O
Ambient temperature
UNITY-500 "nmr500"

PULSE SEQUENCE: relayh
Relax. delay 0.500 sec
COSY 90-90
Acq. time 0.178 sec
Width 2882.3 Hz
2D Width 2882.3 Hz
8 repetitions
120 increments
OBSERVE   H1, 499.8801324 MHz
DATA PROCESSING
Line broadening 0.1 Hz
F1 DATA PROCESSING
Line broadening 0.3 Hz
FT size 1024 x 1024
Total time 11 min, 23 sec

Fig. 24B

COSY

Pulse Sequence: relayh

Solvent: D2O
Ambient temperature
UNITY-500 "nmr500"

PULSE SEQUENCE: relayh
Relax. delay 0.500 sec
COSY 90-90
Acq. time 0.178 sec
Width 2882.3 Hz
2D Width 2882.3 Hz
8 repetitions
120 increments
OBSERVE H1, 499.8801324 MHz
DATA PROCESSING
Line broadening 0.1 Hz
F1 DATA PROCESSING
Line broadening 0.3 Hz
FT size 1024 x 1024
Total time 11 min, 23 sec

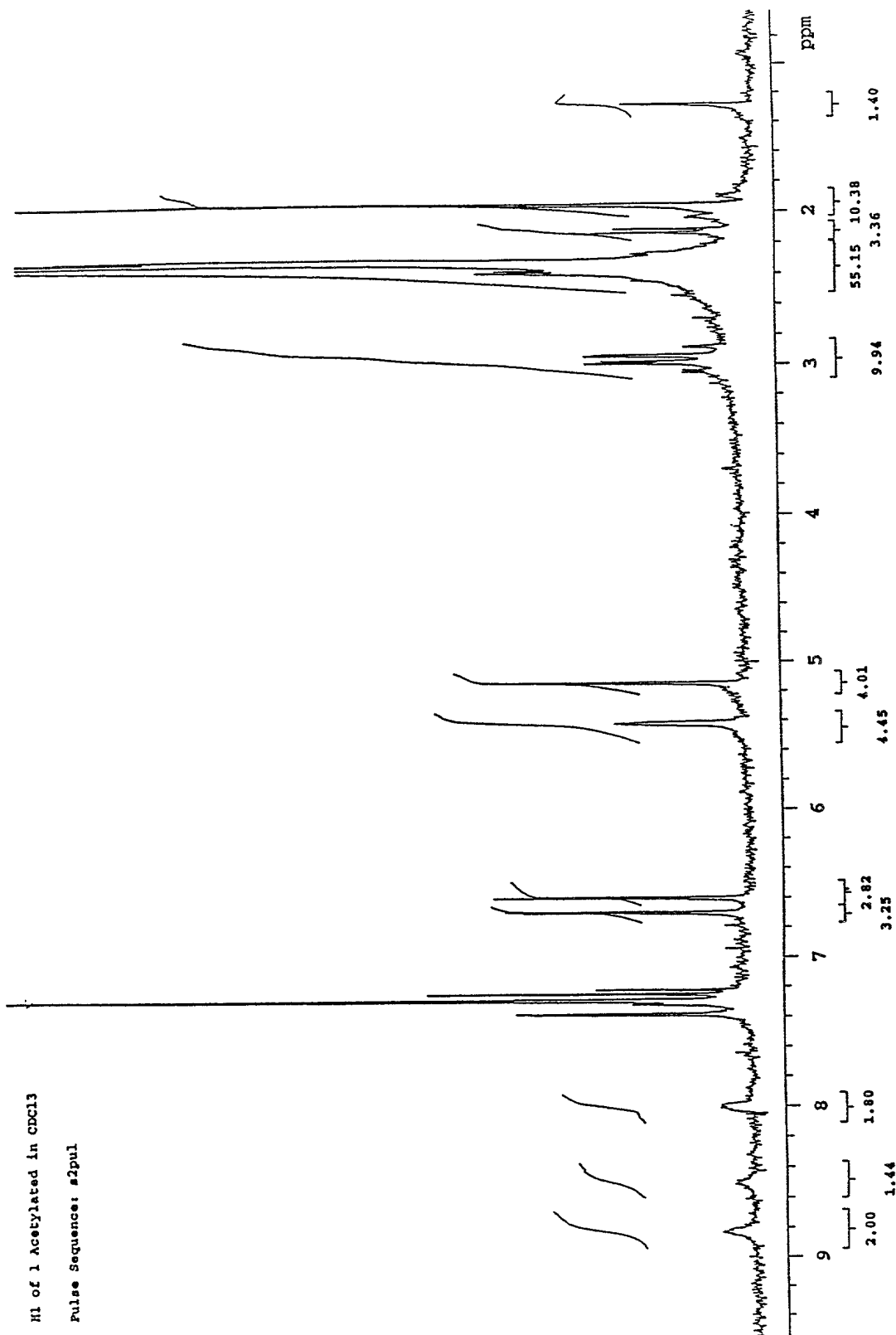Fig. 24C

H1 of 1 Acetylated in CDCl3
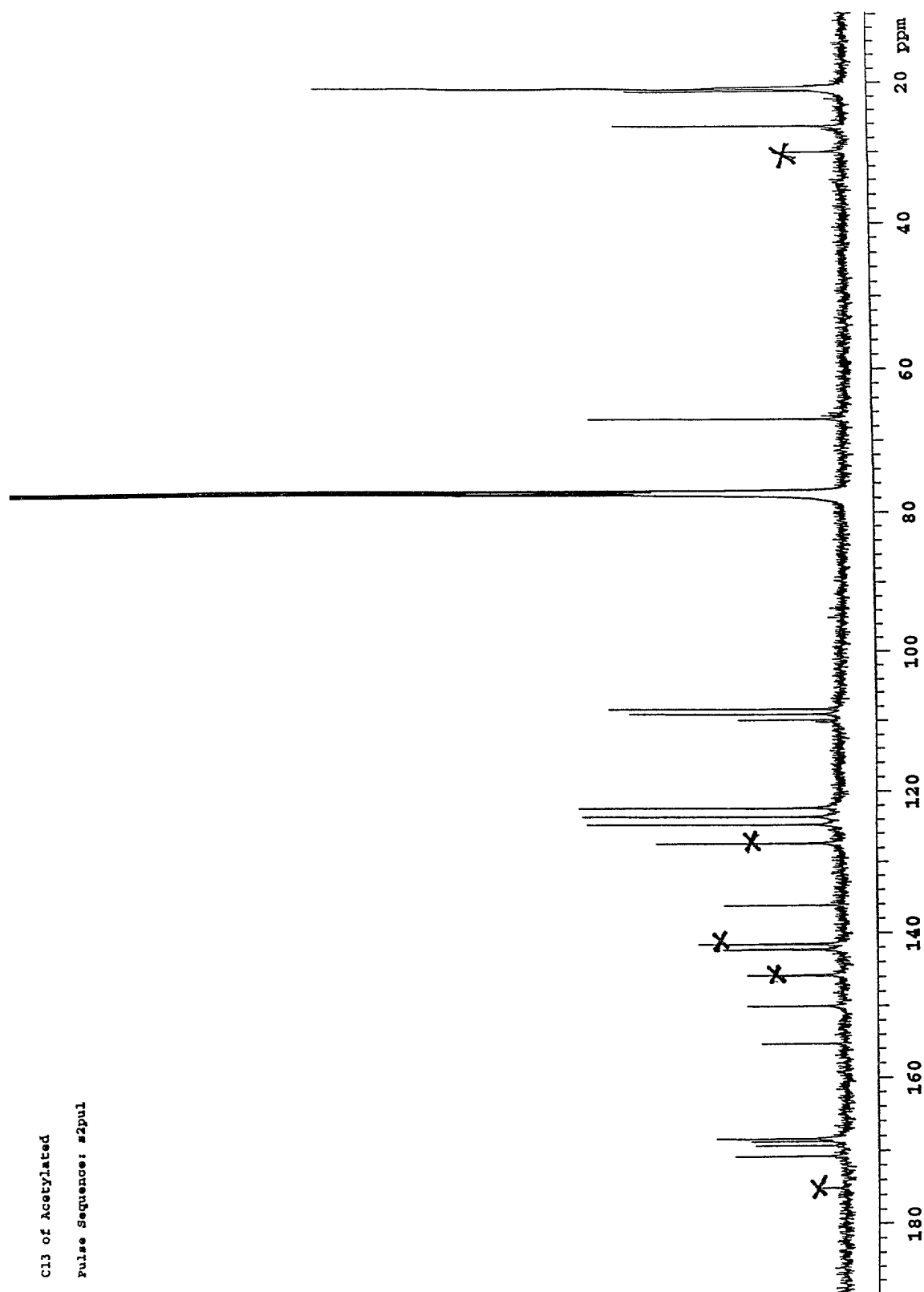
Pulse Sequence: s2pul

ppm

1.40

2   10.38
     3.36

55.15

3   9.94

4

Fig. 25

5   4.01
     4.45

6

7   2.82
     3.25

8   1.80

9   2.00
     1.44

C13 of Acetylated

Pulse Sequence: s2pul
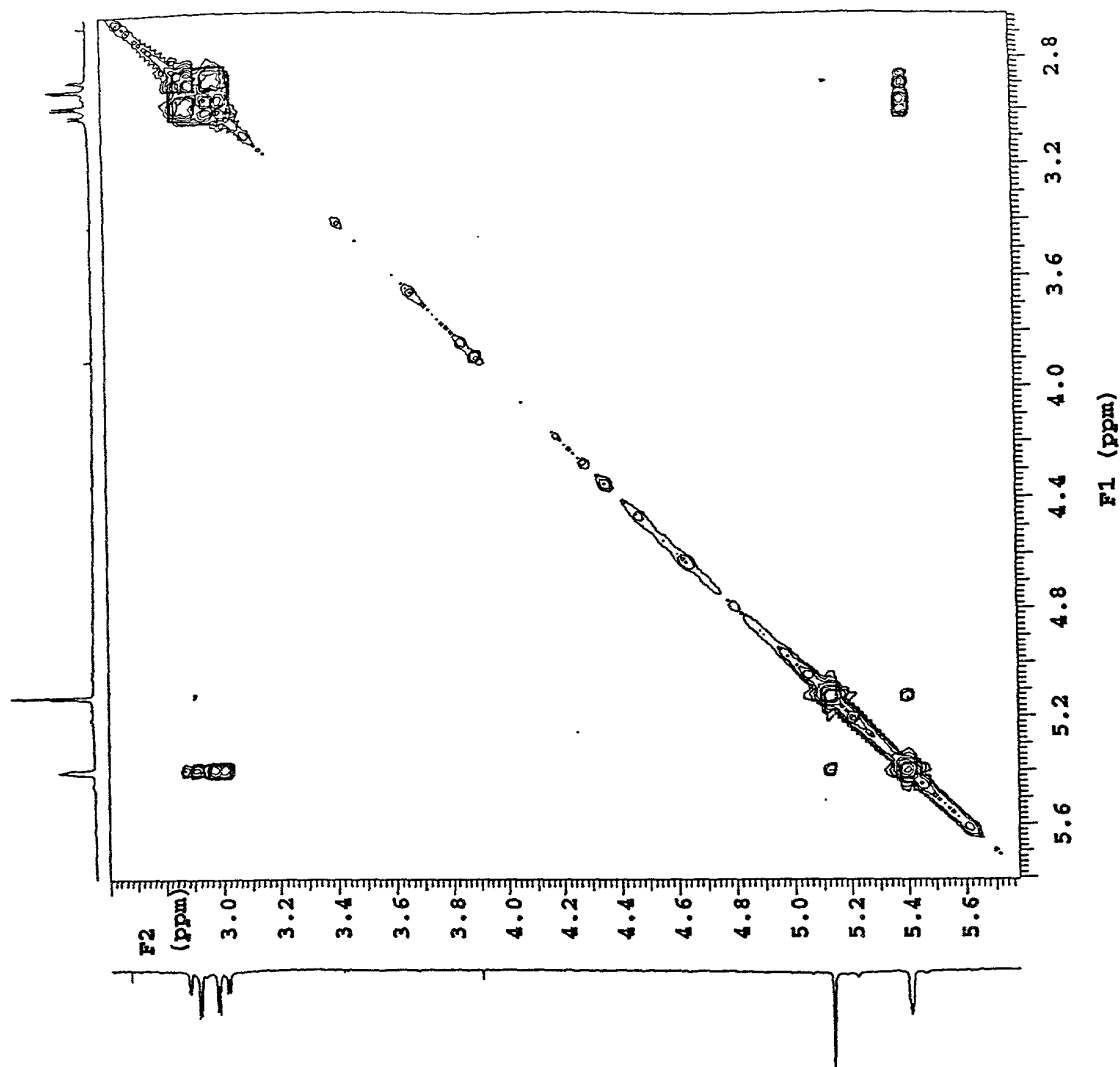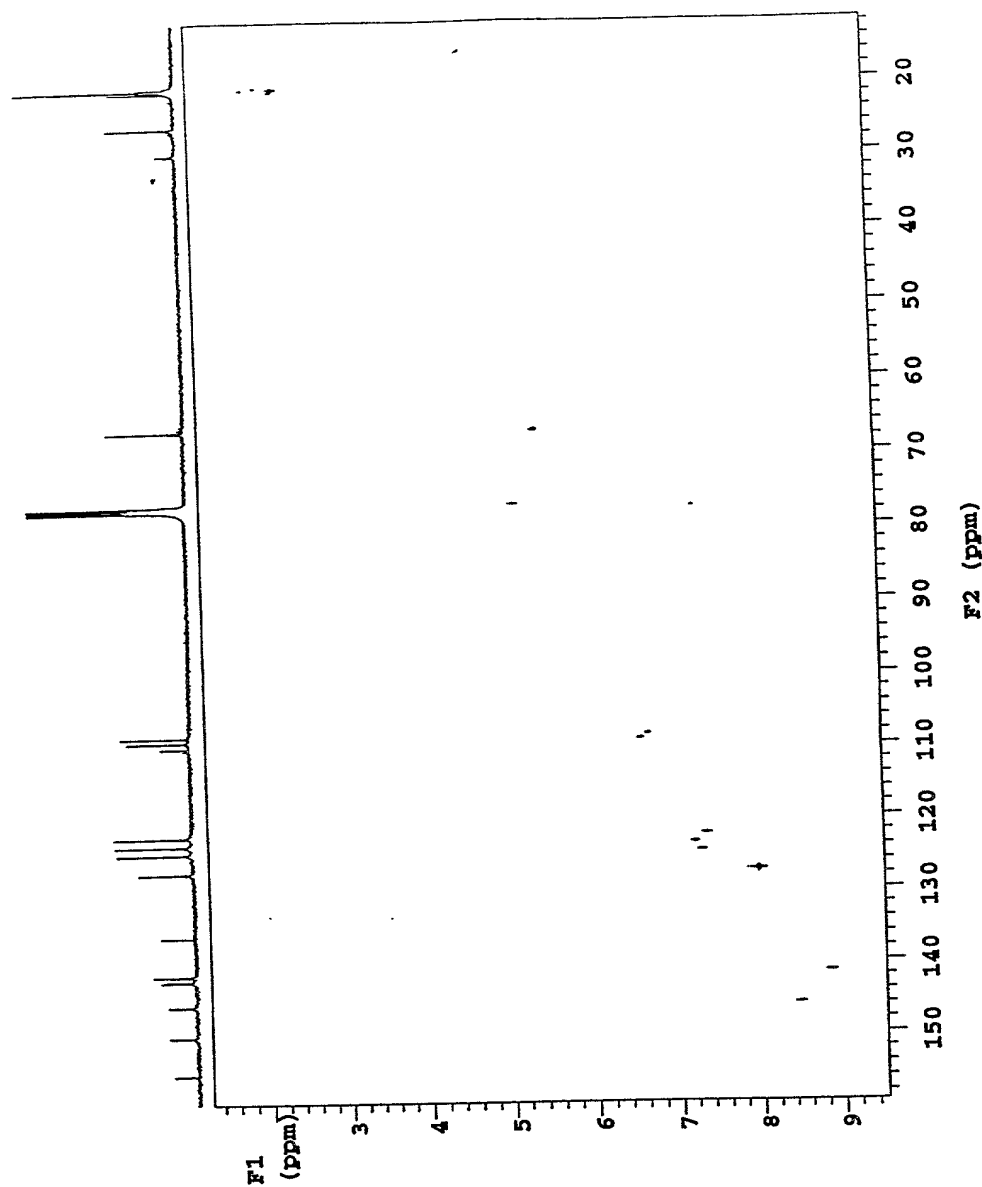
X=pyridinium acetate

Fig. 26

Fig. 27

HETCOR of Acetylated . in CDCl3.

Pulse Sequence: hetcor

Solvent: CDCl3
Temp. 26.0 C / 299.1 K
User: 1-14-87
INOVA-500 "nmr500"

Relax. delay 1.000 sec
Acq. time 0.082 sec
Width 25000.0 Hz
2D Width 4614.9 Hz
208 repetitions
256 increments
OBSERVE C13, 125.7033376 MHz
DECOUPLE H1, 499.9160715 MHz
Power 38 dB
on during acquisition
off during delay
WALTZ-16 modulated
DATA PROCESSING
Line broadening 2.0 Hz
F1 DATA PROCESSING
Line broadening 0.3 Hz
FT size 4096 x 1024
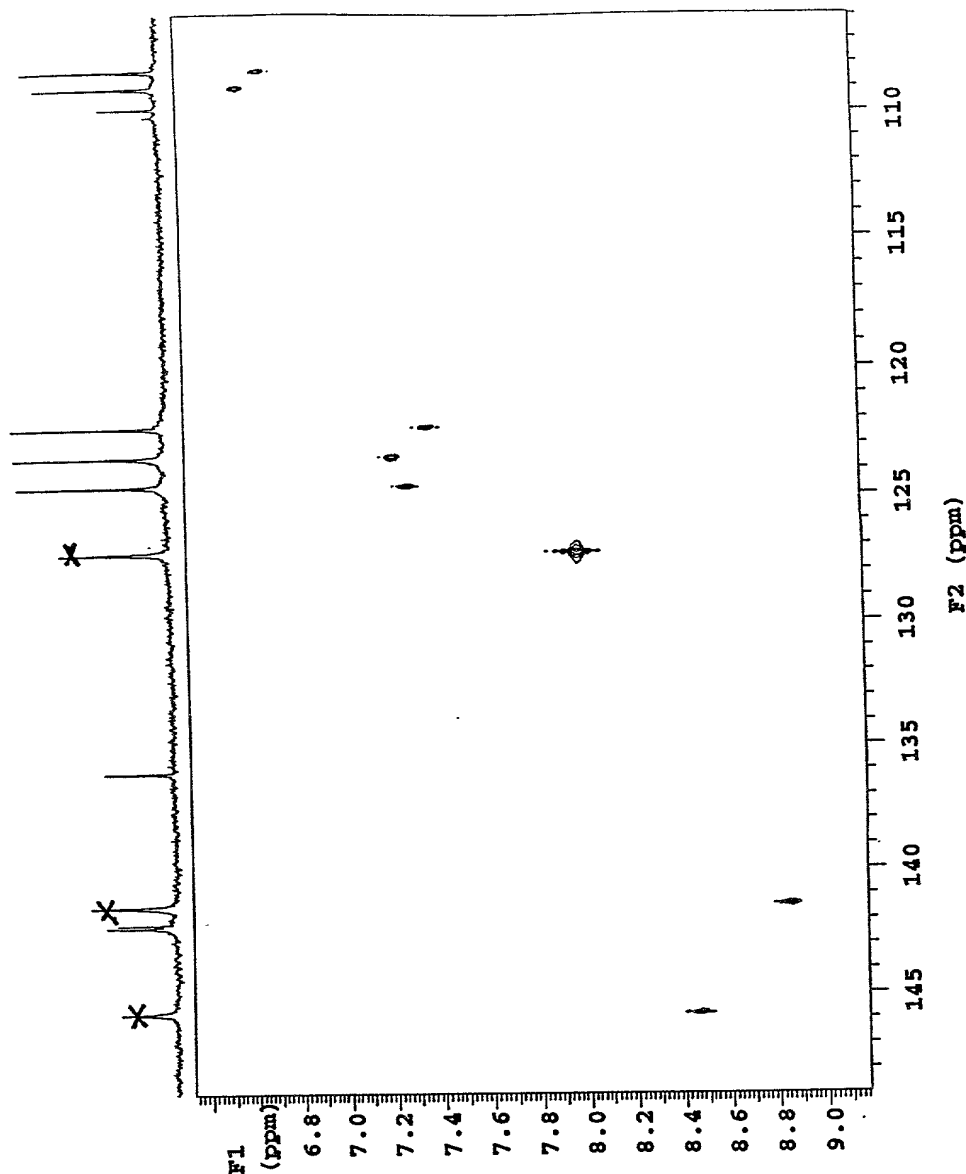Total time 16 hr, 46 min, 21 sec

Fig. 28A

X=pyridinium acetate

HETCOR of Acetylated in CDCl3.

Pulse Sequence: hetcor

Solvent: CDCl3
Temp. 26.0 C / 299.1 K
User: 1-14-87
INOVA-500 "nmr500"

Relax. delay 1.000 sec
Acq. time 0.082 sec
Width 25000.0 Hz
2D Width 4614.9 Hz
208 repetitions
256 increments
OBSERVE C13, 125.7033376 MHz
DECOUPLE H1, 499.9160715 MHz
Power 38 dB
on during acquisition
off during delay
WALTZ-16 modulated
DATA PROCESSING
Line broadening 2.0 Hz
F1 DATA PROCESSING
Line broadening 0.3 Hz
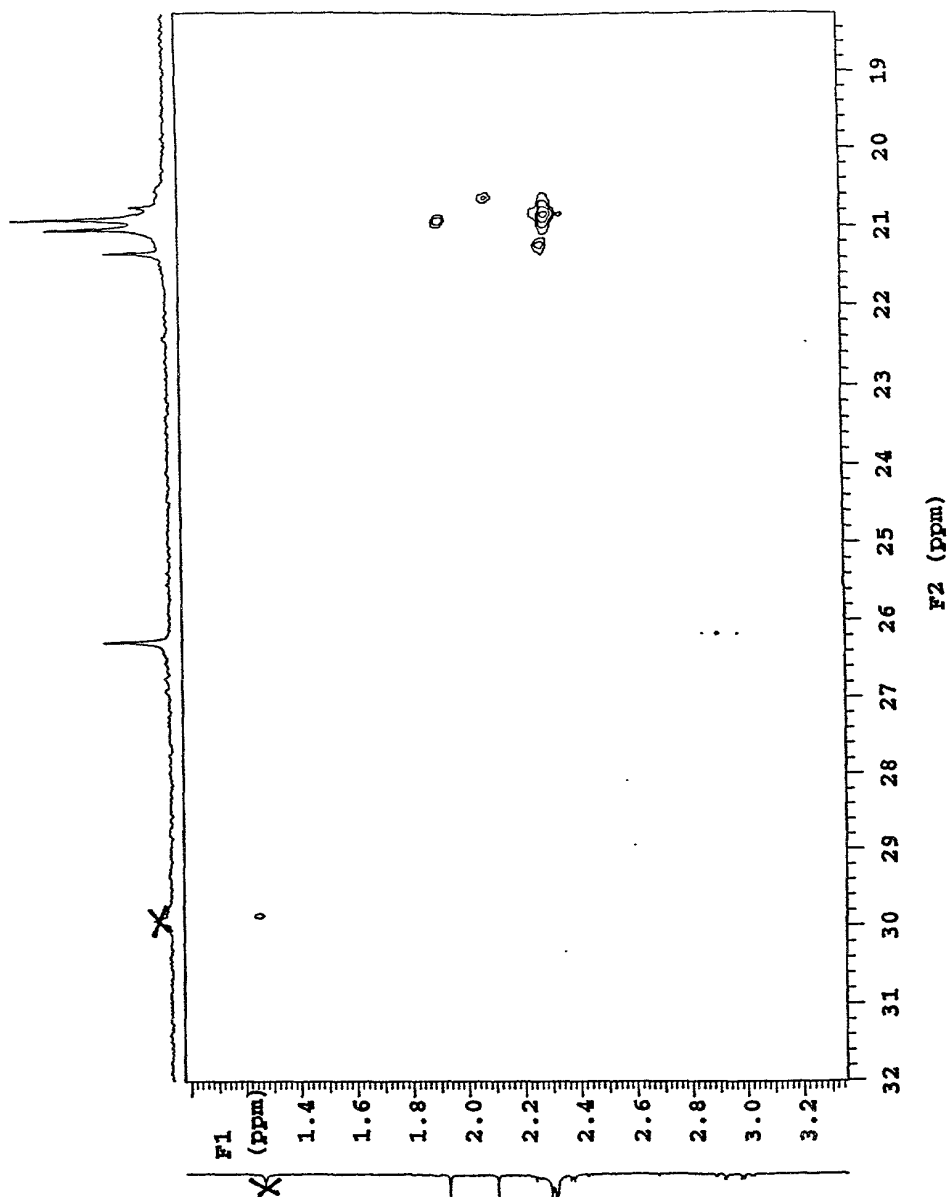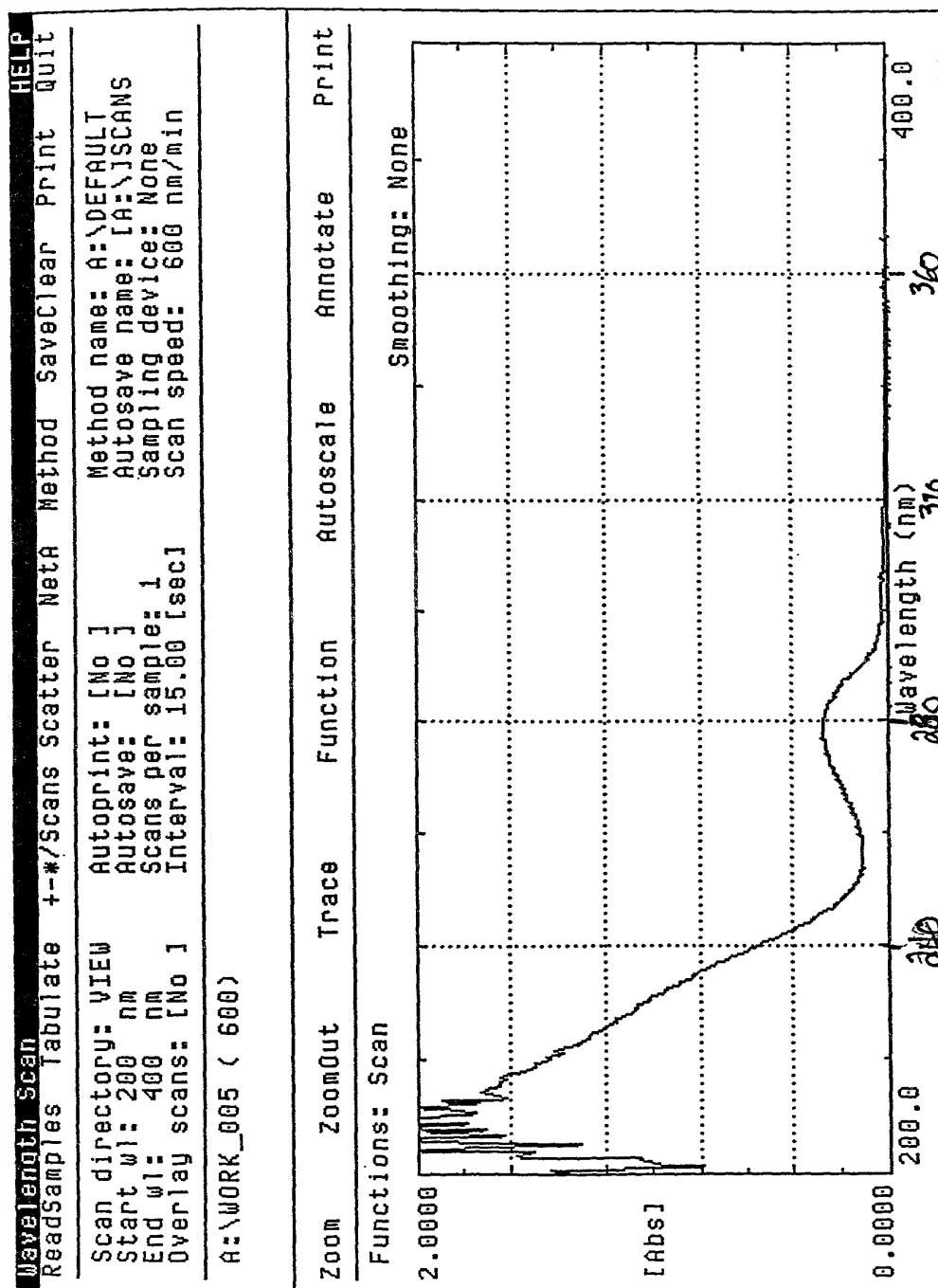FT size 4096 x 1024
Total time 16 hr, 46 min, 21 sec

Fig. 28B

HETCOR of Acetylated in CDCl3.

Pulse Sequence: hetcor

Solvent: CDCl3
Temp. 26.0 C / 299.1 K
User: 1-14-87
INOVA-500 "nmr500"

Relax. delay 1.000 sec
Acq. time 0.082 sec
Width 25000.0 Hz
2D Width 4614.9 Hz
208 repetitions
256 increments
OBSERVE C13, 125.7033376 MHz
DECOUPLE H1, 499.9160715 MHz
Power 38 dB
on during acquisition
off during delay
WALTZ-16 modulated
DATA PROCESSING
Line broadening 2.0 Hz
F1 DATA PROCESSING
Line broadening 0.3 Hz
FT size 4096 x 1024
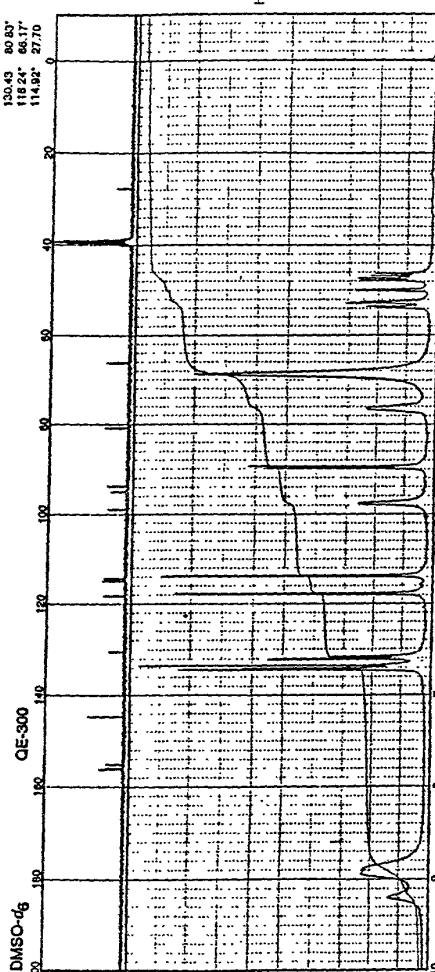Total time 16 hr, 46 min, 21 sec

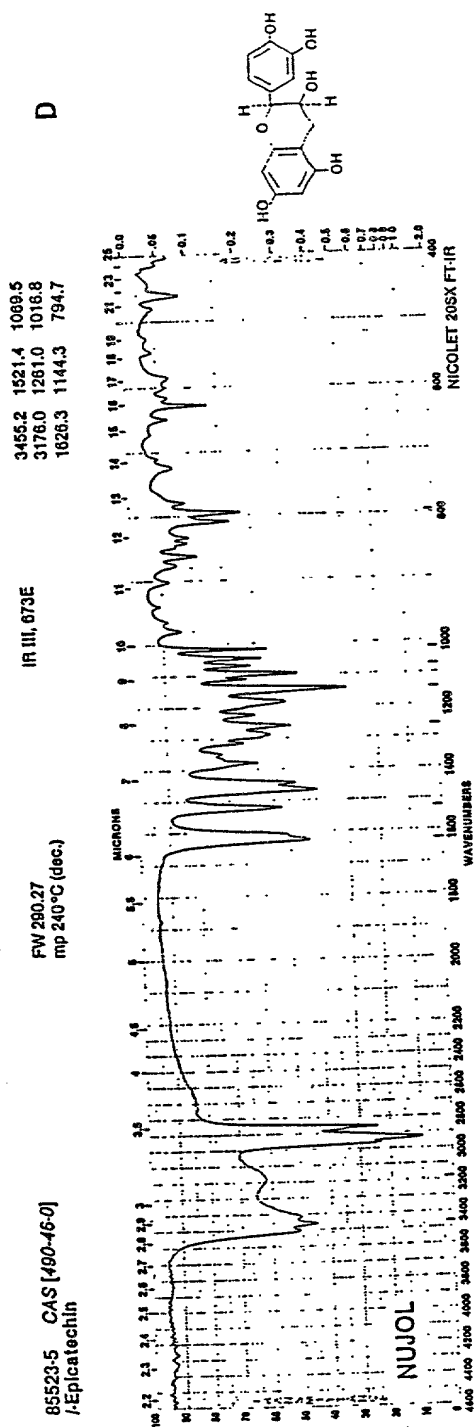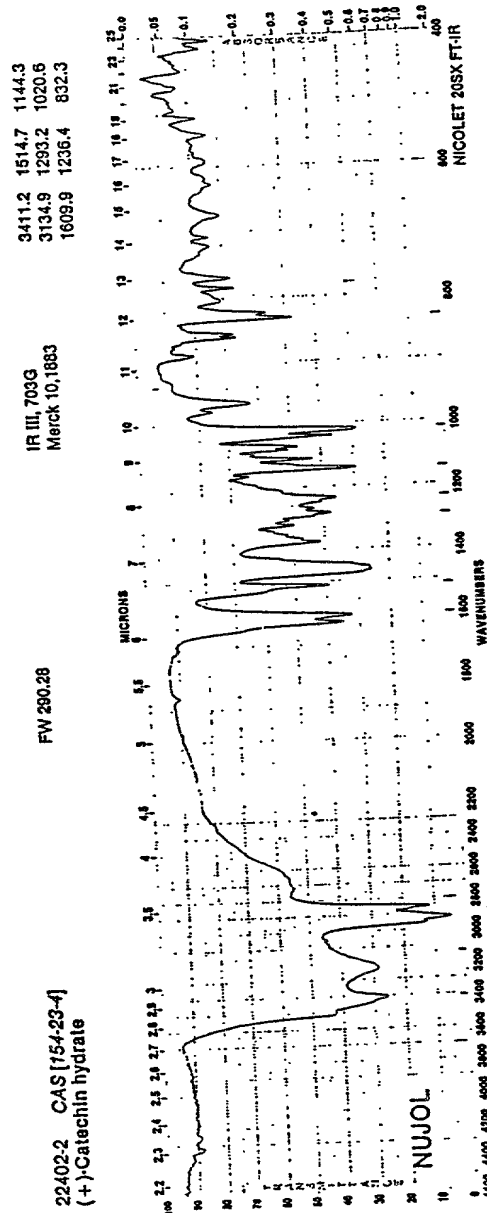X=pyridinium acetate

Fig. 28C

Fig. 29
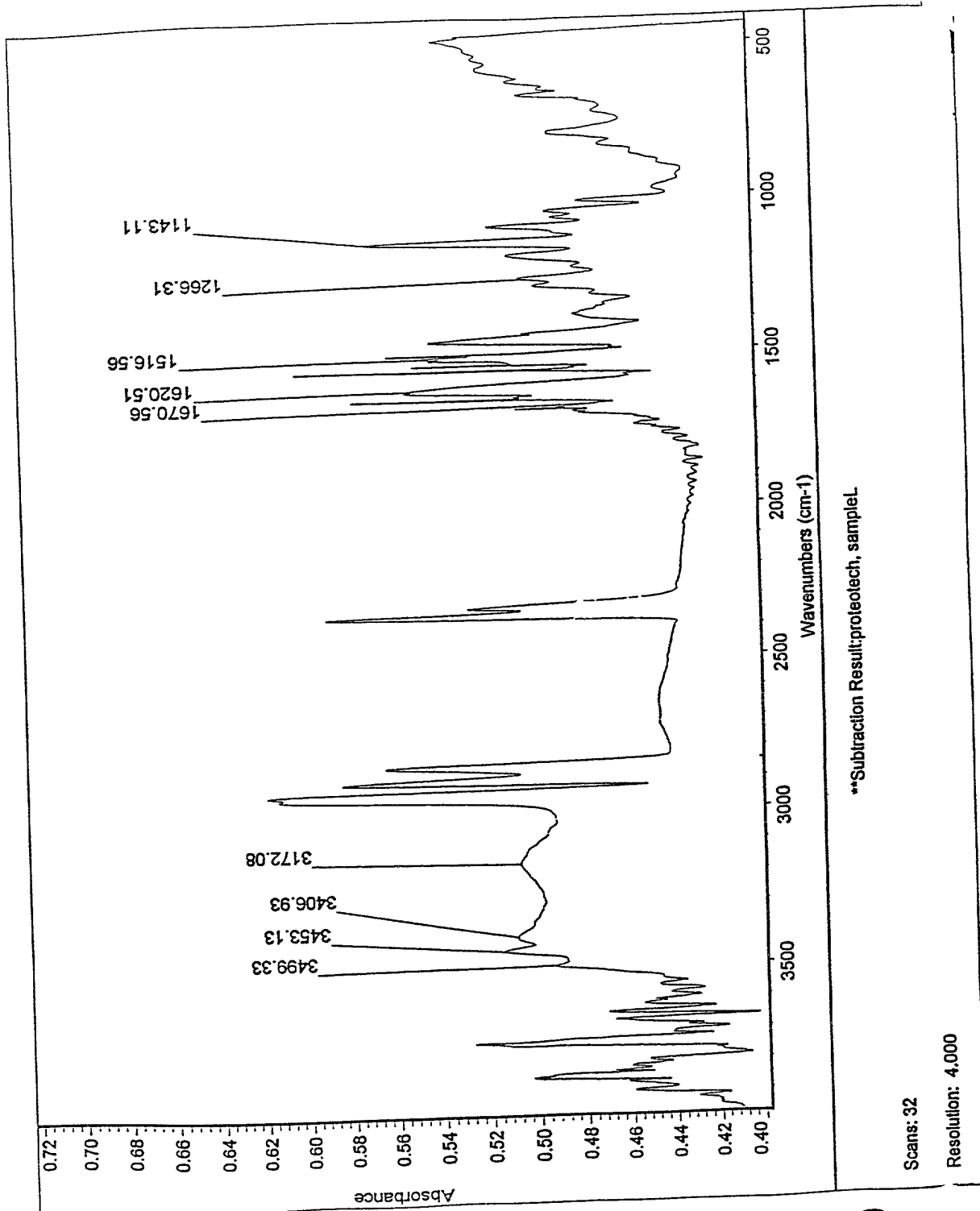
Fig. 30
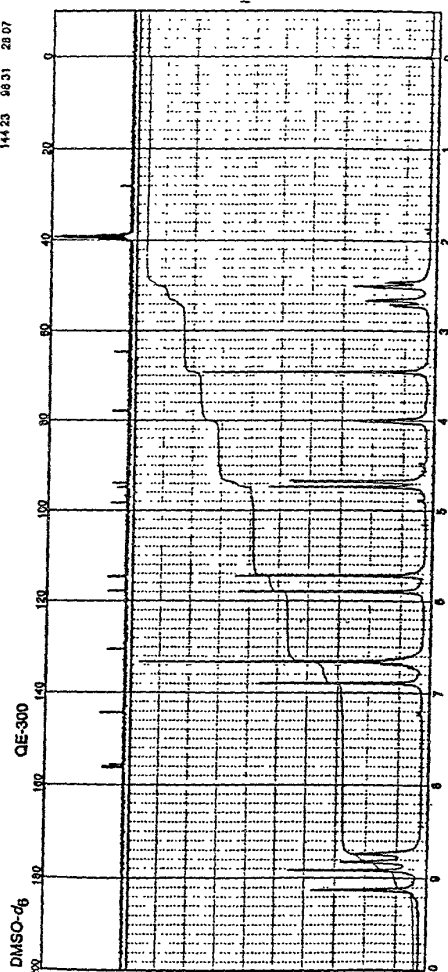
Fig. 31A

Fig. 31B

Fig. 32A

Fig. 32B

Fig. 33

Fig. 34